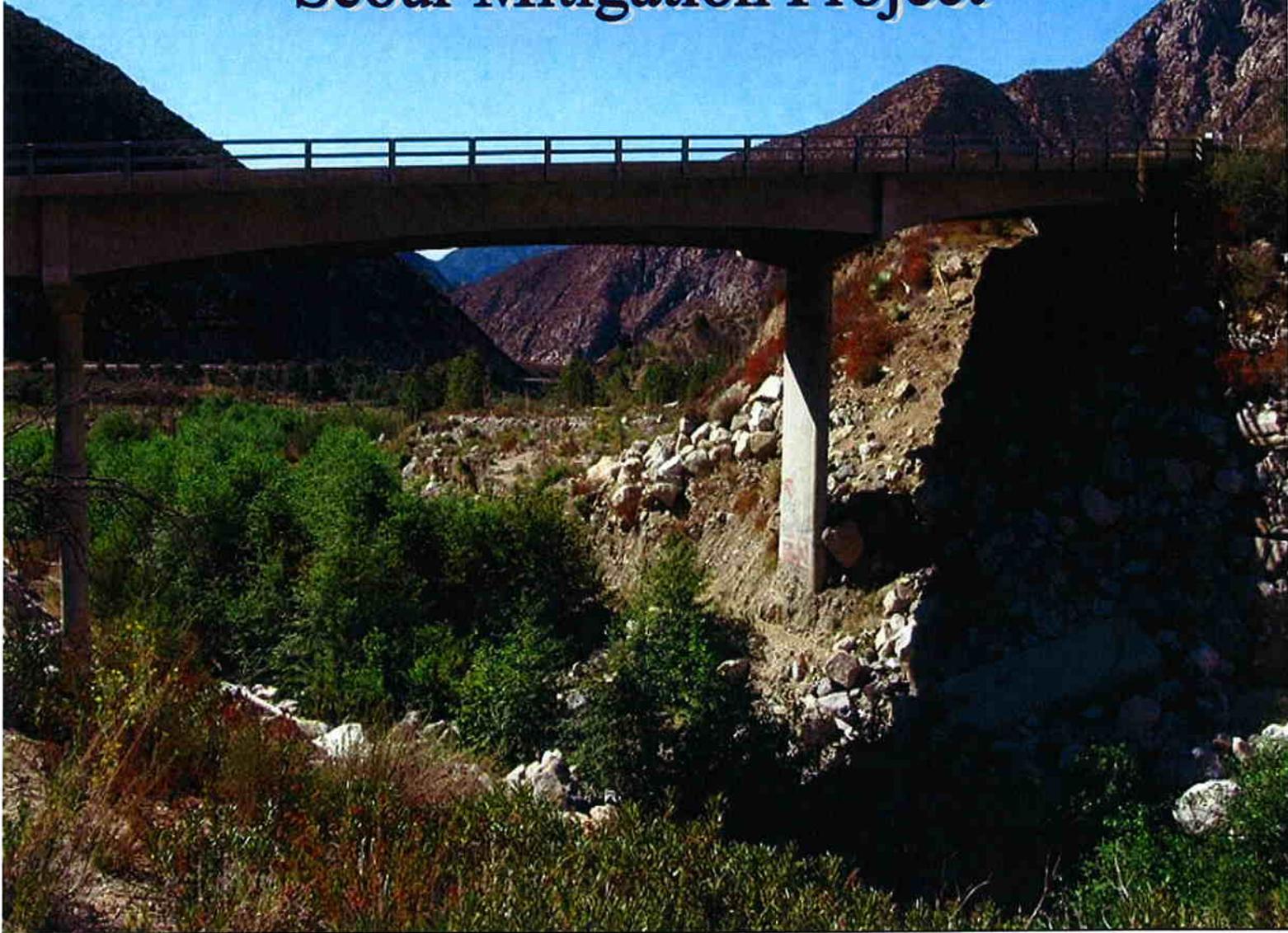


# State Route 39 North Fork San Gabriel River Bridge Scour Mitigation Project



## Initial Study/ Environmental Assessment

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327

CALIFORNIA DEPARTMENT OF TRANSPORTATION  
District 7-Los Angeles  
March 2009

Bridge scour mitigation and rehabilitation on State Route 39, Postmile 31.2, at the North Fork San Gabriel River  
Bridge #53-2245 within the Angeles National Forest

INITIAL STUDY with Proposed Negative Declaration/  
ENVIRONMENTAL ASSESSMENT (IS/EA)

Submitted Pursuant to: (State) Division 13, California Public Resources Code  
(Federal) 42 USC 4332(2) C

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327

THE STATE OF CALIFORNIA  
Department of Transportation

March 17, 2009  
Date of Approval

  
\_\_\_\_\_  
RONALD J. KOSINSKI  
Deputy District Director  
Division of Environmental Planning, District 7  
California Department of Transportation

## PROPOSED NEGATIVE DECLARATION (CEQA)

Pursuant to: Division 13, Public Resources Code

### **Project Description**

The California Department of Transportation (Caltrans) proposes to rehabilitate the existing pier at the North Fork San Gabriel River Bridge #53-2245 to address current scouring at the bridge structure on State Route 39 (PM 31.2) in the Angeles National Forest. The North Fork San Gabriel River Bridge was determined to be inadequate at pier 3 and the degradation is so severe that the existing bridge footing has been exposed. The present scouring could undermine the pier during a major storm event and may result in a bridge failure and future highway closure. The project is located in a scenic area within the Angeles National Forest at the North Fork San Gabriel River.

### **Determination**

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

(1) The proposed project will not significantly affect topography, seismic exposure, floodplains, wetlands, or water quality; (2) the proposed project will not significantly affect natural vegetation, sensitive, endangered, or threatened plant or animal species; (3) the proposed project will not significantly increase amounts of solid waste or increase the consumption of energy and natural resources; (4) the proposed project will not uncover hazardous waste; (5) the proposed project will not significantly affect air quality; (6) the proposed project will not significantly affect land use, public facilities or other socioeconomic features; (7) the proposed project will not require acquisition of property; (8) the proposed project will not significantly affect aesthetics, parklands, open space, or cultural, paleontological, historic or scenic resources.

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Date of Approval

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RONALD J. KOSINSKI  
Deputy District Director  
Division of Environmental Planning, District 7  
California Department of Transportation

# **Table of Contents**

<b>1</b>	<b>PROPOSED PROJECT</b> .....	<b>1</b>
1.1	INTRODUCTION .....	1
1.2	NEED .....	3
1.3	PURPOSE.....	4
1.4	PROJECT DESCRIPTION.....	4
1.5	ALTERNATIVES.....	5
1.5.1	NO-BUILD ALTERNATIVE .....	6
1.5.2	BUILD ALTERNATIVES.....	6
	<i>Alternative 1- Scour Mitigation, Seismic Retrofit, and Bridge Rail Replacement</i> .....	6
	<i>Alternative 2- Bridge Replacement</i> .....	6
1.6	PERMITS AND APPROVALS NEEDED.....	7
<b>2</b>	<b>AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MEASURES TO MINIMIZE HARM</b> .....	<b>9</b>
2.1	EXISTING AND FUTURE LAND USE, PLANNING, AND GROWTH .....	10
2.1.1	<i>Regulatory Setting</i> .....	10
2.1.2	<i>Affected Environment</i> .....	10
2.1.3	<i>Environmental Consequences</i> .....	14
2.1.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	14
2.2	PARKS AND RECREATION .....	14
2.2.1	<i>Affected Environment</i> .....	14
2.2.2	<i>Environmental Consequences</i> .....	15
2.2.3	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	15
2.4	COMMUNITY CHARACTER AND COHESION .....	15
2.4.1	<i>Regulatory Setting</i> .....	15
2.4.2	<i>Affected Environment</i> .....	16
2.4.3	<i>Environmental Consequences</i> .....	16
2.4.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	16
2.5	UTILITIES/EMERGENCY SERVICES .....	17
2.5.1	<i>Affected Environment</i> .....	17
2.5.2	<i>Environmental Consequences</i> .....	18
2.5.3	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	18
2.6	TRAFFIC, TRANSPORTATION, PEDESTRIAN AND BICYCLE FACILITIES.....	18
2.6.1	<i>Affected Environment</i> .....	18
2.6.2	<i>Environmental Consequences</i> .....	19
2.6.3	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	19
2.7	VISUAL/AESTHETICS .....	19
2.7.1	<i>Regulatory Setting</i> .....	19
2.7.2	<i>Affected Environment</i> .....	20
2.7.3	<i>Environmental Consequences</i> .....	22
2.7.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	22
2.8	CULTURAL RESOURCES.....	22
2.8.1	<i>Regulatory Setting</i> .....	22
2.8.2	<i>Affected Environment</i> .....	23
2.8.3	<i>Environmental Consequences</i> .....	23
2.8.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	24
2.9	HYDROLOGY AND FLOODPLAIN .....	24
2.9.1	<i>Regulatory Setting</i> .....	24
2.9.2	<i>Affected Environment</i> .....	24
2.9.3	<i>Environmental Consequences</i> .....	25
2.9.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	26
2.10	WATER QUALITY AND STORM WATER RUN-OFF.....	27
2.10.1	<i>Regulatory Setting</i> .....	27
2.10.2	<i>Affected Environment</i> .....	27
2.10.3	<i>Environmental Consequences</i> .....	27
2.10.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	28
2.11	GEOLOGY / SOILS / SEISMIC / TOPOGRAPHY .....	28
2.11.1	<i>Regulatory Setting</i> .....	28
2.11.2	<i>Affected Environment</i> .....	29

2.11.3	<i>Environmental Consequences</i> .....	30
2.11.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	30
<b>2.12</b>	<b>HAZARDOUS WASTE/MATERIALS</b> .....	<b>30</b>
2.12.1	<i>Regulatory Setting</i> .....	30
2.12.2	<i>Affected Environment</i> .....	31
2.12.3	<i>Environmental Consequences</i> .....	31
2.12.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	31
<b>2.13</b>	<b>AIR QUALITY</b> .....	<b>32</b>
2.13.1	<i>Regulatory Setting</i> .....	32
2.13.2	<i>Affected Environment</i> .....	33
2.13.3	<i>Environmental Consequences</i> .....	36
2.13.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	37
<b>2.14</b>	<b>NOISE AND VIBRATION</b> .....	<b>38</b>
2.14.1	<i>Regulatory Setting</i> .....	38
2.14.2	<i>Affected Environment</i> .....	40
2.14.3	<i>Environmental Consequences</i> .....	40
2.14.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	41
<b>2.15</b>	<b>NATURAL COMMUNITIES</b> .....	<b>42</b>
2.15.1	<i>Regulatory Setting</i> .....	42
2.15.2	<i>Affected Environment</i> .....	42
2.15.3	<i>Environmental Consequences</i> .....	44
2.15.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	45
<b>2.16</b>	<b>WETLANDS AND OTHER WATERS</b> .....	<b>46</b>
2.16.1	<i>Regulatory Setting</i> .....	46
2.16.2	<i>Affected Environment</i> .....	46
2.16.3	<i>Environmental Consequences</i> .....	47
2.16.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	47
<b>2.17</b>	<b>PLANT SPECIES</b> .....	<b>47</b>
2.17.1	<i>Regulatory Setting</i> .....	47
2.17.2	<i>Affected Environment</i> .....	47
2.17.3	<i>Environmental Consequences</i> .....	48
2.17.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	48
<b>2.18</b>	<b>ANIMAL SPECIES</b> .....	<b>48</b>
2.18.1	<i>Regulatory Setting</i> .....	48
2.18.2	<i>Affected Environment</i> .....	49
<b>2.19</b>	<b>THREATENED AND ENDANGERED SPECIES</b> .....	<b>51</b>
2.19.1	<i>Regulatory Setting</i> .....	51
2.19.2	<i>Affected Environment</i> .....	51
2.19.3	<i>Environmental Consequences</i> .....	61
2.19.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	63
<b>2.20</b>	<b>INVASIVE SPECIES</b> .....	<b>63</b>
2.20.1	<i>Regulatory Setting</i> .....	63
2.20.2	<i>Affected Environment</i> .....	63
2.20.3	<i>Environmental Consequences</i> .....	63
2.20.4	<i>Avoidance, Minimization, and/or Mitigation Measures</i> .....	64
<b>2.21</b>	<b>CLIMATE CHANGE</b> .....	<b>64</b>
2.21.1	<i>Regulatory Setting</i> .....	64
<b>3</b>	<b>COMMENTS AND COORDINATION</b> .....	<b>67</b>
<b>3.1</b>	<b>CONSULTATION WITH AGENCIES/SCOPING</b> .....	<b>67</b>
<b>4</b>	<b>LIST OF PREPARERS</b> .....	<b>68</b>
<b>5</b>	<b>DISTRIBUTION LIST</b> .....	<b>69</b>
<b>APPENDIX A- CEQA CHECKLIST</b> .....		<b>71</b>
<b>APPENDIX B- TITLE VI POLICY STATEMENT</b> .....		<b>81</b>
<b>APPENDIX C- DRAFT ENVIRONMENTAL COMMITMENT RECORD</b> .....		<b>83</b>

**LIST OF FIGURES:**

- Figure 1: Project Location Within the Angeles National Forest
- Figure 2: Exposed Bridge Pier
- Figure 3: View of the Exposed Pier From Below
- Figure 4: Proposed Bridge Alternatives
- Figure 5: View from Roadway at Bridge Number 53-2244 Heading North Towards Bridge Number 53-2245
- Figure 6: Crossing the North Fork San Gabriel River Bridge, Heading North
- Figure 7: Flood Hazard Boundary Map
- Figure 8: Proposed Impact Area
- Figure 9: CO<sub>2</sub> Emissions vs. Speed (Highway)

**LIST OF TABLES:**

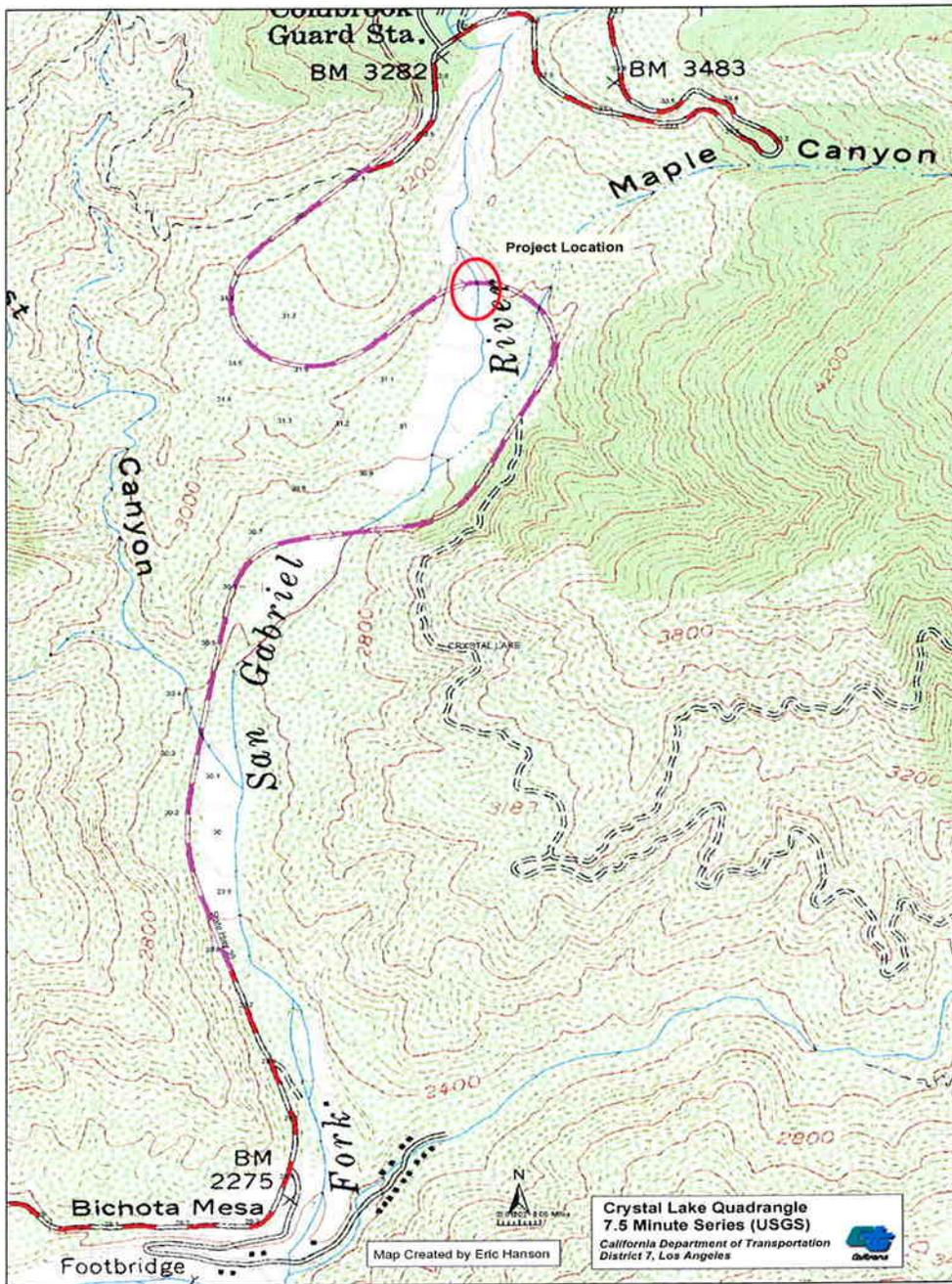
- Table 2.1-1: Land Use in the Immediate Vicinity of the Proposed Project
- Table 2.5-1: Emergency Service Providers and Local Hospitals
- Table 2.13-2: Ambient Air Quality Standards
- Table 2.14-2: Noise Levels of Common Activities
- Table 2.18-2: Wildlife Species Observed within the Project Area
- Table 2.19-2: Special- Status Wildlife Species Known to Occur Within the Vicinity of the Project Site
- Table 2.19-3: Special- Status Plant Species Known to Occur Within the Vicinity of the Project Site

# 1 PROPOSED PROJECT

## 1.1 INTRODUCTION

The California Department of Transportation (Caltrans) proposes to rehabilitate the North Fork San Gabriel River Bridge, (Bridge number 53-2245) on State Route 39 (SR-39). The proposed project is located within the Angeles National Forest under Federal jurisdiction of the United States Forest Service (USFS). The road is currently used for emergency access and service vehicles. The proposed project would increase access from the southern areas of Interstate 210 (I-210) and the City of Azusa to the northern limits of State Route 2 (SR-2) and the Wrightwood recreation area.

The U.S. Bureau of Public Roads built the existing bridge over the North Fork San Gabriel River in 1967. Caltrans proposes to repair the North Fork San Gabriel River Bridge to address an existing scour issue. Scour is the result of the erosive action of flowing water excavating and carrying away material from the bed and banks of streams. The high velocity in the channel or the instability of the loose soil can cause the water from the river to flow underneath the piles that support the bridge structure, giving way to potential collapse. The project is located within the Angeles National Forest, 15 miles north of the City of Azusa at an elevation of approximately 2,800 feet. See Figure 1 for the project location.



**Figure 1-** Project Location within the Angeles National Forest

Angeles National Forest personnel, the Los Angeles Sheriff’s Department, and other emergency personnel would be provided with improved access for search and rescue activities with the rehabilitation of the North Fork San Gabriel River Bridge. The repair of the existing facility would also provide a safe travel-way for emergency crews, city personnel, and the public.

The Caltrans 2008 State Highway Operation and Protection Program (SHOPP) was prepared in accordance with California Government Code Section 14526.5, Streets and Highways Code Section 164.6, and the strategies outlined in Caltrans’ Policy for Management of the SHOPP. The 2008 SHOPP is a 4-year program of projects related to collision reduction, bridge preservation, roadway and roadside preservation, and mobility enhancement as well as the preservation of other transportation facilities related to the state highway system. The proposed project is included as part of the bridge rehabilitation category and is programmed for construction in the 2011/2012 fiscal year.

## 1.2 NEED

In recent years, Caltrans has evaluated the North Fork San Gabriel River Bridge for safety. It was determined that the bridge has severe scour deterioration, which could undermine the bridge foundation with a heavy river flow.

### **Bridge Instability and Safety Analysis**

The Structure Replacement and Improvement Needs (STRAIN) Report prepared by Caltrans, dated May 12, 2005, identified the project as Sub-Scour Mitigation, meaning that either retrofitting the substructure to withstand a potential scour condition or replacement of the bridge would be necessary.

Caltrans prepared a Bridge Inspection Report, dated October 2, 2007 which concluded that deterioration has occurred at the bridge, and the bed elevation has dropped 8.8 feet (2.7 meters) between 1968 and 2000. Fires destroyed vegetation in the watershed in 2003, and since then the channel has degraded an additional 4.3 feet (1.3 meters).

The scour evaluation for this bridge was determined to be a 3 out of 9, (with 0 being the worst) due to increased erosion of the streambed at the bridge and around the bridge piers. The Division of Engineering Services Office of Geotechnical Support concluded that the bridge is scour critical, which means that the bridge foundation has been determined to be unstable. If the existing footing is subject to prolonged scour without remediation, the result could be complete bridge failure. The proposed project would correct structural deficiencies caused by scour and streambed degradation.

Due to the closure of SR-39, hikers, bicyclists, and other individuals have taken advantage of the scenic highway free of motor vehicles, making the bridge rehabilitation critical to maintain safe operation for all users.

### **Regional Traffic Circulation and Economic Development**

The bridge rehabilitation would prevent scour issues from creating an unsafe crossing or possible bridge collapse. Once rehabilitated, the North Fork San Gabriel River Bridge could be used to access the Crystal Lake Campground and Recreation Area that was closed due to discontinued access since the Curve Fires in 2002. The Crystal Lake Recreation Area is situated at an elevation of approximately 5,800 feet and is equipped with facilities that include a general store, café, visitor center, amphitheater, multiple restroom locations, and picnic tables. The reopening of this area has the capability of bringing tourists and travelers to boost the economic accrual of the region. Bridge rehabilitation would contribute to increased access to the Crystal Lake Recreation Area, improving the potential for economic accrual of the area and revitalizing the vacant facility.

Additionally, the scour issue at the North Fork River Bridge is a factor contributing to the inadequate regional access to Route 2 and the Angeles Recreation Area. The northern areas of Wrightwood and Mount Waterman, along with several other ski areas, are tourist destinations for winter activities. The bridge rehabilitation would increase the potential for system linkages and modal relationships that have since been degraded due to the poor condition of the bridge facility. Refer to figure 2 for a visual depiction of the proposed project location within the Angeles National Forest.

### **Enhanced Access for Safety Personnel and Fire Suppression Forces**

The dense forest conditions and low-lying shrubbery accumulation in the Angeles National Forest in the San Gabriel Wilderness on State Route 39 leave the area prone to wildfires. The bridge restoration would provide access for the United States Forest Service (USFS) to mobilize

equipment in the event of wildfires and allow for increased mobility in the area, as well as the ability to manage the buildup of potential fire fuels such as dry biomass and dense brush. After the Curve Fire in 2002, 20,857 acres were burned and the fire suppression costs mounted to \$13,341,621, making increased access for fire suppression forces and deterrence measures essential.<sup>1</sup>

After a fire, depletion of vegetative cover creates greater erosion potential. During heavy storms after the fire season, streams often transport large quantities of sediment, increasing the potential for floods. This potential flooding could increase scour and undermine the bridge foundation.<sup>2</sup>

In addition, the proposed project is vital in providing enhanced access for the Los Angeles County Sheriff's Department and other emergency personnel for search and rescues activities and can contribute to a reduction in response times.

### **Compliance with the California Street and Highway Code**

According to Section 91 in the California Street Highway Code, "The department shall improve and maintain the state highways, including all traversable highways which have been adopted or designated as state highways by the commission, as provided in this code." SR-39 is a designated state highway, and the route includes the North Fork San Gabriel River Bridge, therefore qualifying this project as applicable to conformity with Section 91 of the Highway Code.

## **1.3 PURPOSE**

SR-39 is located in Los Angeles County, within the Angeles National Forest. The route consists of a scenic landscape that was historically used for access to and from I-210 to the south and SR-2 to the north. The lower elevations are covered with dense chaparral that rapidly changes to pine and fir-covered slopes with a variety of wildlife as you enter the upper elevations.<sup>3</sup> Recreational activities include hiking, bicycling, fishing, camping, and other tourist activities.

The proposed project on the North Fork San Gabriel River Bridge is intended to achieve the following goals:

- To provide a safe bridge facility to motorists traveling into the San Gabriel Canyon and Angeles National Forest areas.
- To improve local access to commercial and recreation areas within Azusa and the scenic campgrounds, trailheads, and day use areas in the northern area of SR- 39 and Route 2.
- To be consistent with local, regional, and national plans that are relevant to the Angeles National Forest.

## **1.4 PROJECT DESCRIPTION**

This section describes the proposed action and the design alternatives that were developed by a multidisciplinary team to achieve the project purpose and need while avoiding or minimizing

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<sup>1</sup> USDA Forest Service, Vic Andresen. *Curved Fire Burned Area Emergency Report Implementation Plan*. [http://www.fs.fed.us/r5/angeles/documents/curve\\_fire\\_baer\\_plan.pdf](http://www.fs.fed.us/r5/angeles/documents/curve_fire_baer_plan.pdf) (October 29, 2008).

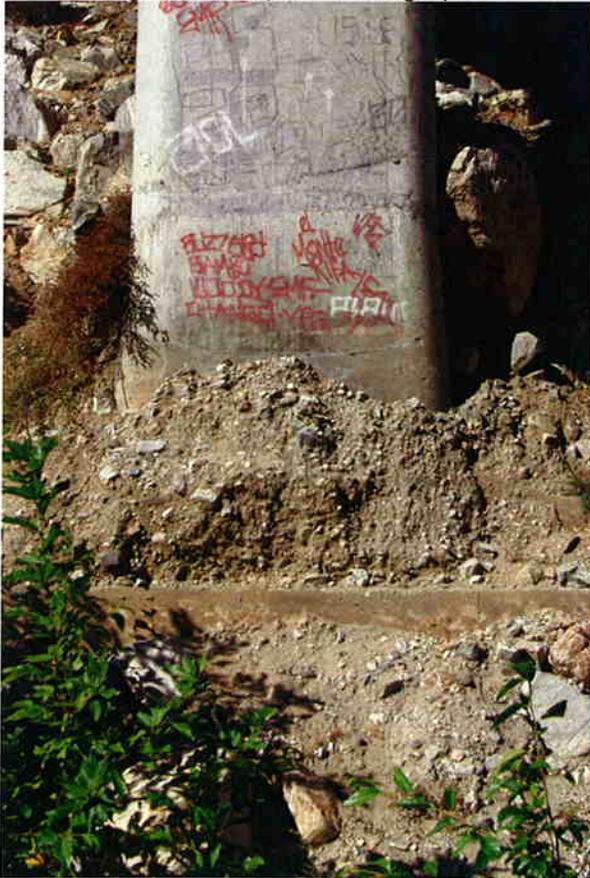
<sup>2</sup> County of Los Angeles Department of Public Works, *The San Gabriel River Corridor Master Plan*, [http://dpw.lacounty.gov/wmd/Watershed/sq/mp/docs/SGR\\_MP-Chapter2-1.pdf](http://dpw.lacounty.gov/wmd/Watershed/sq/mp/docs/SGR_MP-Chapter2-1.pdf) (October 6, 2008).

<sup>3</sup> US Forest Service, *Angeles National Forest*, <http://www.fs.fed.us/r5/angeles/recreation/wild-sangabriel.shtml> (October 8, 2008).

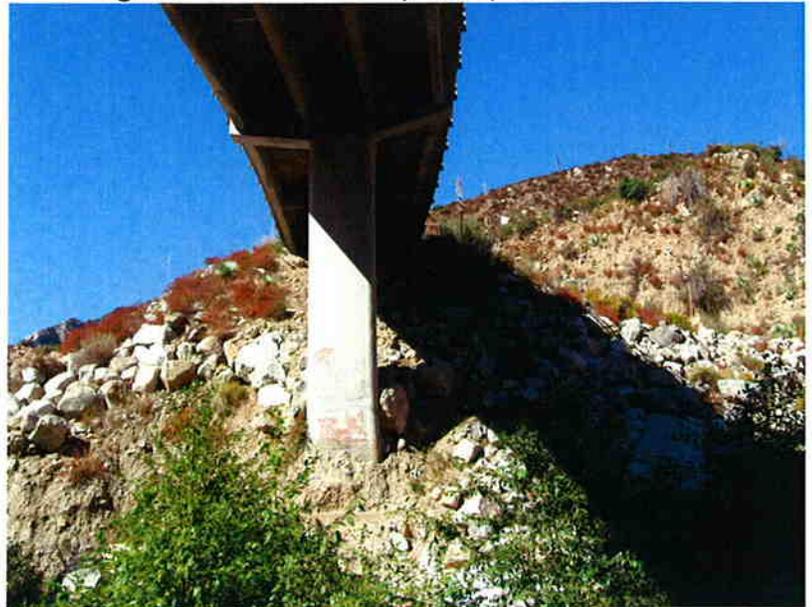
environmental impacts. The alternatives considered are the No Build Alternative, the Bridge Retrofit Alternative, and the Bridge Replacement Alternative.

Caltrans proposes to repair the North Fork San Gabriel River Bridge in order to prevent further scouring of the bridge structure. The bridge has been deemed scour critical and its rehabilitation is necessary to maintain safe access. Presently, the bridge column has been degraded so severely that the bridge column foundation is exposed and has the possibility of being undermined.

**Figure 2-** Exposed bridge pier



**Figure 3-** View of the exposed pier from below



The following improvements would be included as part of the proposed project:

- ◆ Scour mitigation
- ◆ Bridge rail replacement
- ◆ Seismic retrofit
- ◆ Construction of steel column casings
- ◆ Footing retrofit with steel piles
- ◆ Retaining walls along the bank
- ◆ Check dams

## 1.5 ALTERNATIVES

The following alternatives were analyzed based on their potential ability to meet the purpose and need for the proposed project. The factors that were included in the decision-making process include the cost of the alternatives, as well as the potential environmental and/or biological impacts. The alternatives include the No-Build Alternative, Bridge Retrofit Alternative, and Bridge Replacement Alternative.

### **1.5.1 NO-BUILD ALTERNATIVE**

This alternative considers the effects of not implementing the proposed project. The No-Build alternative provides a baseline for comparing the impacts with the Build Alternatives. Under the No-Build Alternative, the existing condition of the bridge would remain scour critical. Improvements to the bridge footing would not be implemented and the bridge would most likely remain closed. This alternative is not consistent with the long-term objective of improving the overall operation and safety for highways within the State of California. In addition, this alternative would not provide a safe structure for Caltrans maintenance crews, emergency service personnel, or the recreational users of the Angeles National Forest.

### **1.5.2 BUILD ALTERNATIVES**

Please see Figure 4 for design cross sections of the existing and proposed bridge dimensions.

#### ***Alternative 1- Scour Mitigation, Seismic Retrofit, and Bridge Rail Replacement***

Alternative 1, or the bridge retrofit alternative, would include scour mitigation, seismic retrofit, and bridge rail replacement of the North Fork San Gabriel River Bridge. It would also include the construction of steel pile casings, footing retrofit with steel piles, retaining walls along the stream, check dams, and rock slope protection. Check dams are intended to be used with drainage structures to reduce overall erosion and to hold material in place during site restoration. The new bridge rail would be a concrete barrier instead of the steel railing that is currently in place. The construction period would require a temporary access road in order for equipment to approach the bridge footing, and an adjacent staging area for storage space. The estimated cost for the bridge retrofit alternative is \$2,457,000.

#### ***Alternative 2- Bridge Replacement***

The Bridge Replacement Alternative would replace the existing bridge with a new bridge structure with the same footprint as the existing bridge but would be constructed 40 feet longer, therefore requiring the abutments to be set back. Due to the mountainous topography, the alignment of the new bridge would remain the same as the existing bridge. This alternative would also require cutting the slope at the north end of the bridge along Route 39 in order to accommodate the required standard shoulder width of 8 feet. Construction would require an access road in order for equipment to reconstruct the bridge, and an adjacent staging area. The estimated cost for the bridge replacement alternative is \$3,290,000 and includes the cost of removing the existing bridge.

#### ***Comparison of Alternatives***

After comparing and weighing the benefits and impacts of all of the feasible alternatives, the project development team has recommended the Bridge Retrofit Alternative as the preferred alternative, subject to public review. Final selection of a preferred alternative would occur subsequent to the public review and comment period.

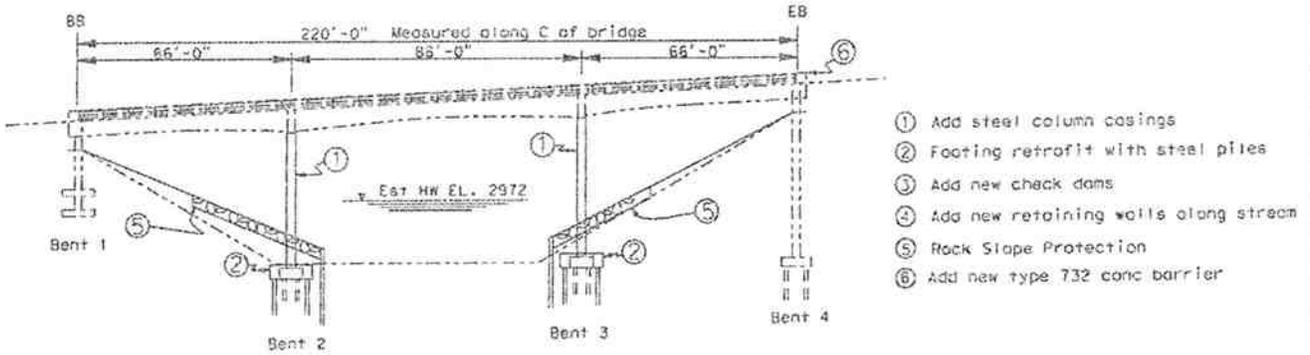
After the public circulation period, all comments will be considered, and Caltrans will select a Preferred Alternative and make the final determination of the project's effect on the environment. In accordance with the California Environmental Quality Act (CEQA), if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration (ND) or Mitigated ND. Similarly, if Caltrans determines the action does not significantly impact the environment, Caltrans, as assigned by the Federal Highway Administration (FHWA), will issue a Finding of No Significant Impact (FONSI) in accordance with the National Environmental Policy Act (NEPA).

## 1.6 PERMITS AND APPROVALS NEEDED

The proposed project would require permits/approvals from the following state and federal agencies.

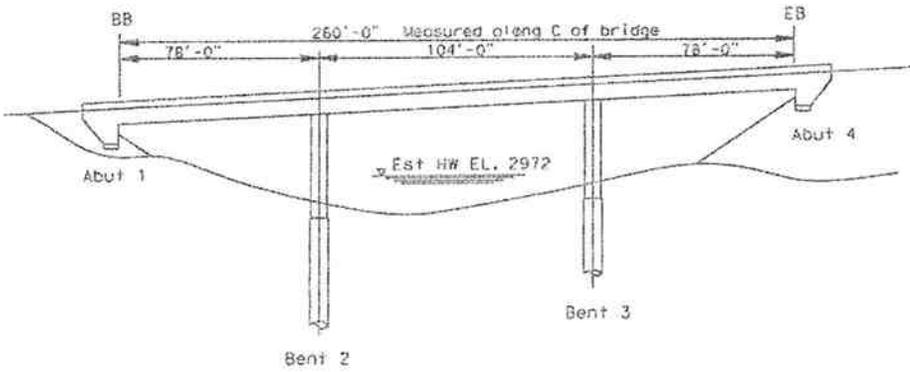
<b>Agency</b>	<b>Permit/Approval</b>
United States Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species
United States Forest Service (USFS)	Angeles National Forest Decision Document
United States Army Corps of Engineers (USACE)	Section 404 Permit for filling or dredging waters of the United States.
California Department of Fish and Game (CDFG)	1602 Agreement for Streambed Alteration
California Regional Water Quality Control Board (RWQCB)	401 Water Certification Permit Dewatering Permit

**Figure 4: Proposed Bridge Alternatives**



**ALTERNATIVE 1**

ELEVATION  
 No Scale



**ALTERNATIVE 2**

ELEVATION  
 No Scale

**North Fork of  
 San Gabriel River Bridge**  
 Bridge No. 53-2245

## 2 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MEASURES TO MINIMIZE HARM

This chapter explains the impacts that the proposed project would have on the human, physical, and biological environment within the project and surrounding areas. It describes the existing environment that could be affected by the project, potential impacts from each alternative, and the proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impact analysis and subsequent discussions.

Projects located in California that are undertaken by federal agencies, utilize federal funds, or require discretionary approval from federal agencies are subject to both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). Determining significance on a project's potential environmental impacts requires careful evaluation based on technical data. The term "project area" refers to the access road and areas within the stream that would be utilized for implementation of the proposed project. Technical studies were conducted to provide background data and to assist in evaluating the environmental consequences of the proposed project. This chapter provides a discussion of topics relevant to the project, which include the regulatory setting, the area that would be affected, impacts, and proposed measures to minimize harm.

As part of the scoping and environmental analyses conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- ◆ **Timberlands.** The project site contains no timberlands and the proposed project does not threaten any timberland resources.
- ◆ **Community Impacts/ Environmental Justice/ Relocations.** No relocations would be required for the proposed project and no housing communities lie within the project area.
- ◆ **Agricultural/ Farmland.** No Agricultural land is within the project site, nor would any Williamson Act contract land would be converted or impacted.
- ◆ **Coastal Zone.** The proposed project is not within the coastal zone.
- ◆ **Paleontology.** Paleontology is the study of life in past geologic time based on fossil plants and animals. No sites of relevance are recorded within the proposed project area.
- ◆ **Wild and Scenic Rivers.** There are no designated wild and scenic rivers within the project site. The San Gabriel River is not among the 15 designated Wild and Scenic Rivers in California.

Environmental impacts and mitigation measures reported in this Initial Study/ Environmental Assessment were based on technical studies conducted for this project. All technical studies and reports are available for public review by request, or can be viewed at the following locations:

- **Caltrans District 7 Headquarters**  
100 South Main Street; Los Angeles, California 90012
- **Azusa City Hall**  
213 East Foothill Boulevard; Azusa, California 91702
- **City of Azusa Public Library**  
729 North Dalton Avenue, Azusa, California 91702

# HUMAN ENVIRONMENT

This discussion will present existing and future land use in the project study area, the proposed project's consistency with state, regional, and local plans and programs, and the impact the proposed project may have on parks and recreation. Additionally, it will present data analyzed in regard to community impacts such as community character and cohesion, utilities and emergency services, traffic and transportation (including pedestrian and bicycle facilities), and potential effects to visual and cultural resources.

## 2.1 EXISTING AND FUTURE LAND USE, PLANNING, AND GROWTH

### 2.1.1 *Regulatory Setting*

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969, require an evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

The following discussion of the proposed project within the context of the human environment has been excerpted and adapted from the Community Impact Assessment Report (ICF Jones & Stokes, September 2008) that was prepared for another recent project along SR-39.

### 2.1.2 *Affected Environment*

The proposed project is located within the San Gabriel River District of the Angeles National Forest. The planning document that guides projects within the forest is the Land and Resource Management Plan adopted by Record of Decision signed on September 20, 2005. The proposed project would occur within the designated San Gabriel Canyon Place.

The existing land use consists of Los Angeles County, which has 4,061 square miles of land area. The Los Angeles County General Plan characterizes land use patterns within the county and establishes designated land uses, which include rural, residential, commercial, industrial, and open space. The proposed project is within an area designated as Open Space within the Angeles National Forest.

Updated in 1986 as part of the Los Angeles County General Plan, the Antelope Valley Area Plan characterizes land use patterns and establishes designations for a large portion of northwestern Los Angeles County. Within the Antelope Valley Area, the predominant land uses include agricultural uses, residential uses, and military reservations, as well as wilderness and

open space areas. This includes the Angeles National Forest, which encompasses much of the southern portion of the Antelope Valley Area and the area surrounding the proposed project.

The Angeles National Forest encompasses approximately 1,036 square miles of land (662,983 acres) administered by the United States Forest Service (USFS), with local headquarters in the City of Arcadia. According to the Land Management Plan for The Angeles National Forest, eight general land use zones have been identified within the forest.

The land use in the immediate vicinity of the proposed project is designated “Developed Area Interface”, due to the fact that it is along SR-39. Outside of the roadway, the area is classified as “Back Country, Non- Motorized”, per the Angeles National Forest Final Land Management Plan Land-Use Zone Map.<sup>4</sup>

The following table 2.1-1 illustrates land use in the immediate vicinity of the proposed project area in more detail.

**Table 2.1-1. Land Use in the Immediate Vicinity of the Proposed Project**

Area	Land Use
<b>Crystal Lake</b>	<b>Developed Area Interface and Back Country Non-Motorized</b> This area includes public recreation and camping facilities operated by the USFS.
<b>North-South Segment of SR-39</b>	<b>San Gabriel Wilderness (west of SR-39)</b> The San Gabriel Wilderness borders SR-39 to the west, with restricted public access.  <b>Developed Area Interface and Back Country Non-Motorized (east of SR-39)</b> A continuation of the Crystal Lake development area interface zone; a variety of hiking access trails are available to the east of the proposed project.
<b>SR-2</b>	<b>Developed Area Interface</b> Intersection of SR-2 and SR-39; public parking and recreational day-use hiking trails.

Source: United States Forest Service, 2005; ICF Jones & Stokes, 2008.

According to the USFS, the majority of the approximately 3 million annual visitors to Angeles National Forest are residents from adjacent communities.<sup>5</sup> The forest is not a major vacation destination for tourists outside of the surrounding region; therefore, the proposed project is not expected to draw substantial numbers of new visitors to the area. The majority of the use of SR-2 and the currently open segments of SR-39 comes from recreational motorists, including motorcyclists, who travel along these routes.

According to the USFS, there are no plans for residential, commercial, or any other development in the immediate vicinity of the proposed project.

Mt. Waterman and Mt. Kratka are privately owned ski areas located along SR-2, approximately four miles west of SR-39. These areas have plans for increased day use within their existing property boundaries. Additional expansion or physical development is prohibited due to the restrictions of the existing adjacent wilderness areas. Other private in-holdings along SR-2 include commercial facilities at Newcomb’s Ranch, approximately 14 miles west of SR-39, and the community of Wrightwood, approximately 20 miles east of SR-39. Both of these areas are

<sup>4</sup> United States Department of Agriculture Forest Service, Pacific Southwest Region, *Angeles National Forest Land- Use Zones*, [http://www.fs.fed.us/r5/scfpr/projects/lmp/images/maps/anf\\_cmyk\\_pdfs\\_082405/01\\_anf\\_luz\\_0719.pdf](http://www.fs.fed.us/r5/scfpr/projects/lmp/images/maps/anf_cmyk_pdfs_082405/01_anf_luz_0719.pdf) (October 21, 2008).

<sup>5</sup> Dumpis, Marty. Deputy forest supervisor. Angeles National Forest. August 6, 2008— telephone conversation.

bound by the Angeles National Forest and currently receive all of their visitors from SR-2. No known construction or expansion is planned for either location.

There are no medical, educational, scientific, or religious institutions within a 1- mile radius of the project site.

### **Consistency with State, Regional, and Local Plans and Programs**

The Southern California Association of Governments (SCAG) adopts Regional Transportation Plans (RTPs) to ensure that projects meet conformity requirements. The North Fork San Gabriel River Bridge Project is within the guiding principles set forth by the 2008 RTP. SCAG's first Regional Preparedness Goal states, "to achieve and sustain at-risk target levels of capability to prevent, protect against, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property, and the region." The rehabilitation of the North Fork Bridge is consistent with this principle by providing increased access for fire suppression and rescue activities. In addition, the proposed project conforms to the standard that is included under the preservation of existing infrastructure and getting most out of our existing system.<sup>6</sup> The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) approved the 2008 RTP and SCAG adopted it.

### **➤ Consistency with the Angeles National Forest Land Management Plan**

Part one of the Angeles National Forest Land Management Plan discusses the vision for the southern California National Forests. This includes providing a balanced and sustainable flow of goods and services for a growing diverse population while ensuring long-term ecosystem health, biological diversity, and species recovery. The national forests also accommodate changing trends in visitor use through outreach efforts, facilities and education that meet the needs of emerging population demand. The rehabilitation of the North Fork River Bridge would meet these requirements by improving access and safety of the bridge structure in the San Gabriel Wilderness and help achieve the vision that has been established for the Angeles National Forest.

Implementation of the proposed project would satisfy the following goals and policies as outlined in the Angeles National Forest Land Management Plan:

- Enhance community protection and reduce the risk of loss of human life, structures, improvements, and natural resources from wildland fire and subsequent floods.
- Improve opportunities for tactical operations and safety near structures, improvements, and high resource values. By providing for defensible space, public and firefighter safety is enhanced.
- Local jurisdictional authorities, citizen groups, and the USFS act together to mitigate hazardous fuel conditions in areas surrounding urban interface, urban intermix, and/or outlying improvements.
- Transportation system of roads and trails is safe, affordable, and environmentally sound; responds to public needs; and is efficient to manage.

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<sup>6</sup> Southern California Association of Governments, *Destination 2030 Mapping Southern California's Transportation Future*, [http://www.scag.ca.gov/rtp2004/2004/Final/FINAL\\_2004\\_RTP.pdf](http://www.scag.ca.gov/rtp2004/2004/Final/FINAL_2004_RTP.pdf) (November 4, 2008).

➤ **Consistency with the San Gabriel River Master Plan**

In Los Angeles County increasing interest in recreation, open space, and habitat areas along river corridors has prompted the need to develop a plan to better incorporate these resources into the functionality of the San Gabriel River. The Los Angeles County Board of Supervisors passed a motion on September 7, 1999 to develop the San Gabriel River Master Plan (SGRMP). The SGRMP acts as a tool that establishes the San Gabriel River as an integral part of the community, and looks to enhance the community's quality of life by providing protection, benefits, and enjoyment to the public.

Implementation of the proposed project would meet the goal of the SGRMP by:

- Preserving and enhancing habitat systems through public education, connectivity, and balance with other uses;
- Encouraging and enhancing safe and diverse recreation systems, while providing for expansion, equitable and sufficient access, balance, and multi-purpose uses.

➤ **Environmental Assessment: Recreational Residence Rebuilding and the Issuance of New 20-Year Permits for the North Fork San Gabriel Recreation Residence Tract and the San Dimas Canyon Recreation Residence Tracts**

The Environmental Assessment (EA) prepared by the USDA Forest Service evaluates the residences that were destroyed in the 2002 Curve Fire for reconstruction. The Curve Fire burned 50 residences in the North Fork San Gabriel Tract, which is designated as a "Very High Fire Hazard Severity Zone" by the Los Angeles County Forester and Fire Warden. The primary fuels were cited as being mainly mature chaparral.

Fire will continue to be a reoccurring event in the analysis area and fire is the primary agent of change in vegetation patterns. The distribution, composition, and structure of almost all plant communities in the analysis area are influenced by fire; steep slopes, narrow canyons, and single access points make fire suppression safety more complex.<sup>7</sup> The rehabilitation of the North Fork Bridge would provide emergency service access to promote fire suppression response.

➤ **Angeles National Forest Business Plan (2003)**

This plan demonstrates the functional responsibilities, operational standards, and financial position of the Angeles National Forest.

The elimination of unfunded maintenance backlog is listed under the "Priorities and Strategies" section of this Plan. Due to the funding gaps identified in this Plan, a huge maintenance backlog has been built up across the forest's wide range of facilities. Many of the Angeles National Forest's roads, bridges, trails, water systems, septic systems, and buildings are in disrepair. The estimated cost of addressing this backlog is over \$50 million dollars. Without investments to reduce this backlog, Angeles National Forest facilities will be lost to future generations of visitors.<sup>8</sup> The rehabilitation of the North Fork Bridge would help decrease this backlog by improving a deteriorating bridge structure.

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<sup>7</sup> USDA Forest Service, *Environmental Assessment Recreational Residence Rebuilding and the Issuance of New 20-Year Permits for the North Fork San Gabriel Recreation Residence Tract and the San Dimas Canyon Recreation Residence Tracts*, [http://gis.fs.fed.us/r5/angeles/documents/recreas\\_rebuild\\_ea.pdf](http://gis.fs.fed.us/r5/angeles/documents/recreas_rebuild_ea.pdf) (November 3, 2008).

<sup>8</sup> USDA Forest Service, *Angeles National Forest Business Plan*, <http://www.fs.fed.us/r5/business-plans/angeles/priorities-strategies/index.html> (November 3, 2008).

The connectivity provided by the North Fork San Gabriel River Bridge rehabilitation would bolster these efforts of fire suppression and removal of hazardous fuels, while addressing a bridge that could be considered as part of the maintenance backlog list.

The repairs at the North Fork Bridge would comply with the goals presented in the land use planning documents as outlined above.

### **2.1.3 Environmental Consequences**

The North Fork San Gabriel River Bridge Scour Mitigation Project would not conflict with any applicable land use plans, policies or regulations, and is consistent with the SCAG 2008 RTP. The proposed project would not add additional lanes to the existing facility under either alternative and would not pose an impact on planning efforts.

The project would be consistent with the USFS Land and Resource Management Plan-Angeles National Forest Strategy, the Los Angeles Department of Public Works San Gabriel River Master Plan, the EA for the residential rebuilding, and the Angeles National Forest Business Plan.

Property values and the local tax base would not be impacted by this project and the displacement of businesses, farms, commercial, and/ or residential developments would not occur.

The proposed North Fork San Gabriel River Bridge rehabilitation project would not increase highway capacity or number of through lanes to support new residential developments. The project is not expected to induce, directly or indirectly, growth or increases in population.

### **2.1.4 Avoidance, Minimization, and/or Mitigation Measures**

Measures to minimize harm are not needed for land use, planning and growth impacts due to the fact that the proposed project is consistent with the land use, planning and growth policies identified above.

## **2.2 PARKS AND RECREATION**

### **2.2.1 Affected Environment**

#### **Angeles National Forest and Associated Recreational Facilities**

The Angeles National Forest was established by Executive Order in December of 1892. It covers over 650,000 acres and is the backyard recreational area to the greater Los Angeles area. Over 36,000 acres within the Angeles National Forest are designated as the San Gabriel Wilderness Area, and have been set aside to preserve their wilderness character.<sup>9</sup> The Angeles National Forest manages the watersheds within its boundaries to provide valuable water to southern California and protects surrounding communities from catastrophic floods.

The land within the forest is diverse in appearance and terrain, with elevations ranging from

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<sup>9</sup> United States Department of Agriculture, *San Gabriel Wilderness, ANGELES National Forest*. [http://www.fs.fed.us/r5/angeles/maps/brochures/san\\_gabriel\\_wilderness.pdf](http://www.fs.fed.us/r5/angeles/maps/brochures/san_gabriel_wilderness.pdf) (October 22, 2008).

1,200 to 10,064 feet. Much of the forest is covered with dense chaparral that changes to pine and fir-covered slopes as you reach the majestic peaks of the higher elevations.

Recreational facilities located north of the proposed project site include: Coldbrook Campground, Crystal Lake Campground, Deer Flat Group Campground, Crystal Lake Day Use Area, Fawnskin Day Use Area, Bear Creek Trailhead, and trailheads leading to the Pacific Crest Trail. Turnouts allowing access to the North Fork San Gabriel River exist along SR-39 south and north of the project area. Areas adjacent to the road and bridge of the project site consist of steep slopes and cliffs, and access to the North Fork San Gabriel River for recreational use at the project location would be difficult.

Primary activities in this area include hiking, biking, equestrian, off-highway vehicles (OHV) riding, scenic driving, picnicking along roadsides, and camping in the large developed campgrounds at Chilao and near Wrightwood. During the winter months, the high country setting provides a venue for winter sports activities, snowplay, and activities such as snowshoeing or crosscountry skiing. Ski areas such as Mt. Baldy and Mountain High also provide seasonal recreational getaways.<sup>10</sup>

### **2.2.2 Environmental Consequences**

The proposed project is limited to areas underneath and directly adjacent to the bridge, including a temporary access road and staging area. The proposed project would not impact any of the recreational facilities listed, as they are located outside of the project area.

The proposed project would provide safe access to existing regional parks, the currently closed Crystal Lake Recreation Area, and other recreational facilities. It would not require the construction or expansion of recreational facilities.

### **2.2.3 Avoidance, Minimization, and/or Mitigation Measures**

Measures to minimize harm are not needed for Parks and Recreation due to the fact that the project area would have no adverse impacts to recreational areas, such as the day use areas and trailheads mentioned above.

## **2.4 COMMUNITY CHARACTER AND COHESION**

### **2.4.1 Regulatory Setting**

The National Environmental Policy Act of 1969 as amended (NEPA), established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). The Federal Highway Administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as, destruction or disruption of human-made resources, community cohesion and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in

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<sup>10</sup> <http://www.fs.fed.us/r5/angeles/documents/rec-site-analysis-POW.pdf>

determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

#### **2.4.2 Affected Environment**

The proposed project is located within the United States Forest Service in the Angeles National Forest. Recreational cabins are located outside of the project area on National Forest land, many existing in the Bichota Canyon area, approximately 1.7 miles downstream of the bridge. Many of the recreational cabins in this area burnt down in the Curve Fire of 2002, and are no longer inhabited.

The neighborhood and community characteristics in the study area are typical of southern California's mountain regions and largely characterized by a sparsely settled alpine environment. Very few residences are located in the study area. Those that can be found in the area include both houses and trailers or mobile homes, which are scattered over the landscape rather than clustered in distinct communities or neighborhoods. Most residences within The Angeles National Forest are recreational and occupied only seasonally. Much of the population is located on the fringes of The Angeles National Forest and at the edge of adjacent cities and towns, rather than within the forest itself. No minority or low-income populations have been identified that would be adversely affected by the proposed project as determined above. Therefore, this project is not subject to the provisions of E.O. 12898.

Within the immediate project area, no businesses or places of employment exist, due to the fact that the project site is a part of a rural mountainous road wholly contained within the Angeles National Forest. The ski resorts at Mt. Waterman and Mt. Kratka may provide limited seasonal employment during winter months, and other commercial centers, such as Newcomb's Ranch (west of SR-39 along SR-2) and Wrightwood (east of SR-39 along SR-2) provide limited employment opportunities. However, economic census data was not available that were specific to the study area.

Acquisition of right-of-way would not be required for this project.

#### **2.4.3 Environmental Consequences**

The proposed project would not displace people or housing or physically divide an established community. Title VI and Environmental Justice impacts due to the implementation of this project are not expected to occur, nor any conflict with any applicable Title VI or Environmental Justice regulations.

#### **2.4.4 Avoidance, Minimization, and/or Mitigation Measures**

Based on the above discussion and analysis, neither Alternative 1, nor Alternative 2 would cause disproportionately high and adverse effects on any minority or low-income populations as per E.O. 12898 regarding environmental justice, and therefore no avoidance, minimization, and/or mitigation measures are necessary.

## 2.5 UTILITIES/EMERGENCY SERVICES

### 2.5.1 Affected Environment

#### Emergency Services/Utilities

Emergency service providers in the study area include the Los Angeles County Sheriff's Department, the Los Angeles County Fire Department, and the U.S. Forest Service (USFS). Cooperative agreements exist among the sheriff's department, fire department, and the USFS for mutual aid and assistance. Emergency and forest service access has been unimpeded along SR-39 despite the closure of the route to the public, with regular minor maintenance of the closed portions of the route since the initial closure in 1978. Since the study area is entirely within The Angeles National Forest and a primarily rural, undeveloped area, many emergency and medical services are substantial distances from the proposed project.

There are no utilities located adjacent to the road, within, or along the bridge structure, therefore utilities would not be affected by this project.

#### Community Facilities

There are few community facilities or services within the study area. The closest aforementioned services and facilities are located to the south in the adjacent cities of Azusa, Glendora, Duarte, and Covina. Due to the remote and rural nature of the study area, no residences or school bus routes are located near the proposed project. Similarly, there are no churches or other houses of worship in the vicinity of the proposed project. The nearest such facilities are located approximately 15 miles to the south in the City of Azusa and the surrounding communities. The following table displays the nearest emergency service providers and local hospitals.

**Table Number 2.5-1**

Facility	Address	Direction Proposed Project	from	Distance (miles)
<b>Emergency Services</b>				
California Highway Patrol	411 N. Central Avenue, Suite 410 Glendale, CA 91203	Southwest, adjacent to SR-134, west of SR-39		26
Angeles National Forest Supervisor's Office (Ranger Station)	701 N. Santa Anita Avenue Arcadia, CA 91006	Southwest, adjacent to I-210, west of SR-39		15.75
Los Angeles County Sheriff's Department, Crescenta Valley Substation	4554 Briggs Avenue La Crescenta, CA 91214	Southwest, adjacent to I-210, west of SR-2		23
Los Angeles County Sheriff's Department, San Dimas Substation	270 S. Walnut Avenue San Dimas, CA 91773	South, adjacent to SR-57, east of SR-39		15
San Gabriel River Ranger District	110 N. Wabash Avenue Glendora, CA 91741	South, adjacent to Foothill Drive, east of SR-39		12.7
Los Angeles County Fire Department, Battalion 16, Station #97	18453 E. Sierra Madre Avenue Azusa, CA 91702	South, adjacent to SR-39		14
Los Angeles County Fire Department, Battalion 16, Station #32	605 N. Angeleno Avenue Azusa, CA 91702	South, adjacent to SR-30		14
Los Angeles County Fire Department, Battalion 4, Station #19	1729 W. Foothill Boulevard La Canada Flintridge, CA 91011	Southwest, near SR-2		22

Los Angeles County Fire Department, Fire Camp 19	22550 East Fork Road Azusa, CA 91702	South, adjacent to SR-39	5.5
Los Angeles County Fire Department, Fire Camp 2	4810 N. Oak Grove Drive La Canada Flintridge, CA 91011	Southwest, adjacent to I-210, east of SR-2	20
California State Fire Marshall	602 E. Huntington Drive, A, Monrovia, CA 91016	Southwest, between SR-2 and SR-39	15

#### **Hospitals**

Santa Teresita Medical Center and Hayden Child Care Center	819 Buena Vista Street Duarte, CA 91010	Southwest, adjacent to Huntington Drive, west of SR-39	13.5
Foothill Presbyterian Hospital	250 S. Grand Avenue Glendora, CA 91741	South, adjacent to SR-66, east of SR-39	13
Huntington East Valley Hospital	150 W. Route 66 Glendora, CA 91740	South, adjacent to SR-66, east of SR-39	14
Doctors Hospital	725 S. Orange Avenue West Covina, CA 91790	South, adjacent to I-10, west of SR-39	18
Foothill Surgery Center	255 E. Santa Clara Street, #240 Arcadia, CA 91006	Southwest, adjacent to I-210, west of SR-39	15.5
Methodist Hospital	300 W. Huntington Drive Arcadia, CA 91007	Southwest, adjacent to I-210, west of SR-39	17

### **2.5.2 Environmental Consequences**

The proposed project would not require or result in the construction of new wastewater or stormwater treatment facilities. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.

### **2.5.3 Avoidance, Minimization, and/or Mitigation Measures**

Prior notification of construction activities would be given to USFS, local law enforcement, and local fire department agencies in order to plan accordingly for access through or around the construction area.

## **2.6 TRAFFIC, TRANSPORTATION, PEDESTRIAN AND BICYCLE FACILITIES**

### **2.6.1 Affected Environment**

SR-39 is a 2-lane road connecting urban areas of the San Gabriel Valley with recreation areas of the Angeles National Forest and State Route 2. The existing facility consists of two 12-foot lanes with 2.0-foot shoulders and 2.0-foot curbs. The roadway is not currently striped for bike lanes, but is used by bicyclists in the project area.

SR-39 is a north-south California State Highway that begins at State Route-1 (Pacific Coast Highway, or SR-1) at its most southerly point in Huntington Beach (Orange County), and in its original alignment, terminated at SR-2 at its most northerly point in The Angeles National Forest. In 1978, the northernmost 4.5 miles of SR-39 (including the connection to SR-2) were closed to public highway traffic because the roadway sustained extensive damage as a result of a massive rock and mudslide caused by heavy rains and floods. The roadway has remained closed to public highway traffic from approximately 1.8 miles west of Crystal Lake Road to the

SR-2 junction because of continued erosion, but access to the closed segment was granted to emergency services and personnel in February 2003 after studies showed that reopening it would not pose any significant environmental impact.

SR-39 is one of the two major routes providing movement for fire suppression forces in the protection of several watersheds, and an important element in The Angeles National Forest Highway County Recreational Plan. For residents of the San Gabriel Valley, the route offers an alternate access link to recreational areas (ski areas, campgrounds, and hiking trails) in The Angeles National Forest. Elected officials and the public have repeatedly requested that this segment of SR-39 be reopened; however, a need for comprehensive environmental studies in the project study area and competition with other regional projects for funding have prevented the roadway improvements and reopening from occurring.

The number of vehicle lanes would not be changed under Alternative 1 or Alternative 2. The striping that is currently on the bridge deck would remain.

However, under Alternative 2, the bridge would be reconstructed and the bridge deck would be two 12-foot lanes and two 8-foot shoulders. This would provide standard lane widths for vehicles and additional space for bicyclists.

In the current project area along SR-39 there are no designated bicycle lanes but shared use is not prohibited. Therefore the proposed project does not eliminate any existing bicycle facilities (i.e., bicycle lanes). Bicycle facility impacts due to the implementation of this project are not expected to occur.

## **2.6.2 Environmental Consequences**

Traffic and transportation impacts due to the implementation of this project are not expected to occur. The proposed project is not expected to increase highway capacity or number of through lanes.

The proposed project does not include sharp curves or other design features that are expected to result in significant hazards to motorists and pedestrians. Once completed, the project would improve circulation of the route and would provide improved emergency vehicle access and response times upon completion of the project. On-site parking is presently not needed, nor would it be needed upon completion of the project.

The proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation.

## **2.6.3 Avoidance, Minimization, and/or Mitigation Measures**

Early and ongoing coordination with emergency service providers and USFS would continue throughout the proposed project's implementation.

## **2.7 VISUAL/AESTHETICS**

### **2.7.1 Regulatory Setting**

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal

government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the Federal Highway administration in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." [CA Public Resources Code Section 21001(b)]

### **2.7.2 Affected Environment**

The Caltrans Division of Landscape Architecture completed a Visual Analysis for the proposed project site on October 21, 2008. The analysis was performed according to criteria set forth in *The Visual Impact Assessment for Highway Projects* (USDOT, FHWA c. 1979). The visual quality was analyzed for the viewpoint in terms of vividness, intactness and unity.

The three evaluative criteria identified as vividness, intactness, and unity that are used to evaluate the viewpoints are described as follows:

- Vividness is the visual power or memorability of the landscape components as they combine in a striking and distinctive positive visual pattern.
- Intactness is the visual integrity of the landscape and its freedom from non-typical encroaching elements. If all of the various elements of a landscape seem to "belong" together, there will be a high level of intactness.
- Unity is the visual harmony of the landscape considered as a whole. Unity represents the degree to which the visual elements maintain a coherent visual pattern.

SR-39 travels north along the San Gabriel River and into the high country of the Angeles National Forest. The road is winding, and the curvy nature of the road provides alternating views of canyons, mountains, and trees. The landcover is a relatively undisturbed natural area that attracts visitors who use the road for scenic driving and access to vista points and recreational facilities. The study area that crosses the San Gabriel River provides views of the San Gabriel River Canyon and chaparral covered slopes along the sides of the road; However, the Curve Fire of 2002 burned the majority of trees in the project area.

**Viewers from the Road:** This viewer group is comprised of highway users. For viewers traveling SR-39 through the project site, distant views are generally of short duration due to the winding roadway. As highway users approach the project area from the south, the foreground and middle ground views along the highway are dominant. The viewers along this segment of SR-39 are primarily in motor vehicles, on bicycles, or motorcycles.

The awareness of visual resources by these highway users is expected to vary with their specific activity. Tourists, which comprise a high percentage of viewers on SR-39, who drive for pleasure and viewing scenery will generally have a high awareness of the visual resources around them, yet are anticipated to be less sensitive to specific changes in that environment. In general, highway users in vehicles would experience the area as a cumulative sequence of views and may not focus on specific roadway features. Since this segment of the roadway has been closed since 1978, their awareness to any specific changes to the visual environment are anticipated to be very low as well.

Motorists and cyclists traveling on SR-39 are the anticipated receptors that would have views of the proposed project location. The rock slope protection and footing retrofit with steel piles would occur underneath the roadway and therefore would only be slightly visible to those traveling on SR-39.



**Figure 5:** View from the roadway at Bridge number 53-2244 heading north towards Bridge number 53-2245



**Figure 6:** Crossing the North Fork San Gabriel River Bridge, heading north

### **2.7.3 Environmental Consequences**

Construction activities would take place from underneath the bridge. The existing degraded footing and column would be reconstructed with steel column casings and steel pile footing. An access road and construction staging area would be located underneath the bridge and would connect to SR-39. Additionally, the existing steel bridge rail would be replaced with a concrete bridge rail barrier.

The Visual Analysis concluded that there would not be any permanent negative visual impacts as a result of this project when the appropriate measures (such as concrete staining) are included. The installation of steel column casing may have a temporary undesirable effect due to its reflective nature, but over time, this effect would lessen due to weathering.

In terms of evaluating this change based on vividness, intactness, and unity of the bridge construction:

The replacement of the existing metal bridge railing with a new concrete barrier may affect the integrity of the natural surroundings. The proposed replacement of this man-made element would be a slight cosmetic difference; however, it would provide motorists with a safer bridge without altering existing views from the bridge.

The vividness of the landscape with the new concrete railing is not expected to change, as a distinctive visual pattern would not be altered. The change from the existing weathered metal rail to a concrete barrier has the potential to change the visual harmony (unity) and the visual integrity (intactness) of the natural surrounding; however, with the staining of the barrier to better match the surrounding environment, these effects could be minimized.

The proposed project would not have a substantial adverse effect on a scenic vista nor would it substantially degrade the existing visual character or quality of the site and its surroundings.

### **2.7.4 Avoidance, Minimization, and/or Mitigation Measures**

- Any damage to vegetation due to the construction and staging area would be restored to its original state by planting native vegetation in-kind.
- Modification of slopes and levees within the stream vicinity after construction would be restored comparable to the existing conditions.
- It is suggested that a stain be used on the new concrete barrier to blend with the adjacent rock outcroppings and surrounding environment.

## **2.8 CULTURAL RESOURCES**

### **2.8.1 Regulatory Setting**

“Cultural resources” as used in this document refers to all historical and archaeological resources, regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended, (NHPA) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of

NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

### **2.8.2      *Affected Environment***

A field survey on November 16, 2007 and an information evaluation of the resources at the South Central Coastal Information Center at California State University Fullerton was undertaken to determine the proposed projects' exemption from further review.

An Archaeological Review was then conducted on November 29, 2007 using the screening criteria contained in the Programmatic Agreement between the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding compliance with Section 106 of the National Historic Preservation Act (106 Programmatic Agreement). The review also consisted of background research from the National Register of Historic Places, The California Register of Historical Places, the California Inventory of Historical Resources, the California Inventory of Historical Landmarks, and the Caltrans Historic Bridge Inventory.

The proposed project was then screened for a second time on September 23, 2008 for any project changes that would alter the initial findings. None were found, and the decision that there was zero possibility that any cultural resource eligible for or listed on either the National Register of Historic Places or the California Register of Historical Resources would be affected by the proposed undertaking remained. The project remains exempt pursuant to the Section 106 Programmatic Agreement.

### **2.8.3      *Environmental Consequences***

The proposed project would involve disturbance to areas underneath the bridge for equipment access, staging, and repair of the bridge footing. However, it was determined that archaeological resources were not anticipated to exist within the project area, and no cultural resources eligible or listed on either the National Register of Historic Places or the California Register of Historical Resources would be impacted by the proposed undertaking.

Additionally, there are no known archaeological/historical sites within the project's Area of Potential Effect (APE). The area possesses low sensitivity for archaeological resources as it has been previously disturbed by cut-and-fill activities.

#### **2.8.4 Avoidance, Minimization, and/or Mitigation Measures**

Measures to minimize harm are not anticipated for the proposed project. However, Best Management Practices (BMPs) would be incorporated and would include but are not limited to:

- As a standard practice, if buried cultural items are encountered during construction, work in the area would halt until a Caltrans archaeologist can evaluate the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Iverson, Caltrans District 7, Historic Resource Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

### **PHYSICAL ENVIRONMENT**

#### **2.9 HYDROLOGY AND FLOODPLAIN**

##### **2.9.1 Regulatory Setting**

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

##### **2.9.2 Affected Environment**

The Caltrans Office of Engineering Services—Hydraulics, completed a Location Hydraulic Study (August 2007) for a separate proposed project that covers the North Fork San Gabriel River Bridge project study area. The purpose of the study is to identify and evaluate the base floodplain within the limits of the proposed project and address the flow of water as it affects the

state highway, the base floodplain, and the surrounding area. The ensuing discussion has been adapted from the aforementioned study, and from research performed by Caltrans Division of Environmental Planning.

The San Gabriel watershed is approximately 9.28 square miles and encompasses the Crystal Lake Recreation Area. Most of the terrain is very steep and has recently been scorched by wildfires. The Upper San Gabriel River Watershed falls largely within the San Gabriel Mountains. The mountains contain the headwaters of the San Gabriel River Watershed and the West, North, and East Forks, as well as the main headwater of the San Gabriel River.

The channel at the site is a moderately steep mountainous stream with degradation, a high velocity channel, and lateral instability cited as the main hydraulic/ scour issues at this bridge. The channel bed consists of mostly alluvial materials ranging from small boulders and cobbles to coarse sand with very little cohesive material.

### **2.9.3 Environmental Consequences**

The proposed project would consist of constructing steel column casings, footing retrofit with steel piles, retaining walls along the stream, check dams, rock slope protection, and bridge rail replacement. Additional work includes working off the paved roadway, grading, and other ground disturbances. An access road would be used to connect the streambed to a staging area adjacent to SR-39.

The proposed project is designed to improve the condition of the bridge footing and column, which are subject to scour degradation. The proposed project would not substantially alter the course of the river due to installation of the steel piles, which are proposed to replace the existing column and footing in the same location.

The proposed project does not constitute a significant floodplain encroachment as defined in 23 Code of Federal Regulations, Section 650.105(q). No impact to any floodplain is expected. As described by the Federal Emergency Management Agency (FEMA), the proposed project is outside the limits of the flood hazard area, as seen in Figure 7 below.



## **2.10 WATER QUALITY AND STORM WATER RUN-OFF**

### **2.10.1 Regulatory Setting**

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the Statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects that result in soil disturbances of at least 1 acre or more require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Caltrans activities that result in less than 1 acre of soil disturbance require a Water Pollution Control Program.

### **2.10.2 Affected Environment**

Section 303(d) of the federal Clean Water Act (CWA), requires States to identify waters that do not meet water quality standards based on the best practicable control technology currently available and effluent limits. States are then required to prioritize waters/watersheds for Total Maximum Daily Load (TMDL) development. States are to compile this information in a list and submit the list to U.S. EPA for review and approval. This list is known as the 303(d) list of impaired waters (303(d) list). It was concluded that the North Fork San Gabriel River Bridge is not listed on the 303(d) list and there are no high-risk areas within the project limits.

The project is under jurisdiction of the Los Angeles Regional Water Quality Control Board, Region 4. The project is within the San Gabriel River Watershed and there are no established Total Maximum Daily Loads (TMDL) within the project limits.

### **2.10.3 Environmental Consequences**

A Storm Water Data Report was prepared March 12, 2008. It was determined that the total Disturbed Soil Area (DSA) would be 1.3 acres. The DSA was calculated by accounting for project site access, staging area, temporary road access to the riverbed, construction area activities, and river diversion. Due to the fact that the proposed project has a DSA larger than 1 acre, a Stormwater Pollution Prevention Plan (SWPPP) would be required, pursuant to the Clean Water Act (Section 402).

There is a potential for short-term temporary construction impacts to water quality during drilling for the steel piles and demolition of the existing column and footing within the streambed. The new steel piles would replace the existing footing and would be located in the same area within

the streambed. Construction would take place partially within the streambed of the North Fork San Gabriel River and along the adjacent rock slopes. The proposed project would not substantially alter the existing drainage pattern of the site in a manner that would result in substantial erosion on or offsite.

The proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff.

Pursuant to the Clean Water Act (Sections 401 and 404), and potentially at the State level pursuant to Fish and Game Code 1602, Caltrans may need to obtain a Water Quality Certification from the Regional Water Quality Control Board, and Individual or Nationwide Permit from the U.S. Army Corps of Engineers, respectively. This would occur during the next phase of the project, the Project Specifications and Estimates (PS&E) phase.

NPDES-Caltrans Statewide Permit (Order No.99-06-DWQ) (NPDES No CAS 000003) and Construction General Permit (Order No. 99-08-DWQ) (NPDES NO. CAS 000002) apply to this project.

#### **2.10.4 Avoidance, Minimization, and/or Mitigation Measures**

- All work would be conducted outside of the rainy season (Oct 1- May 1) to avoid potential impacts to water quality.
- Temporary construction Best Management Practices (BMPs) would be used for the proposed project based on Appendix C of the Project Planning and Design Guide. Typical construction site BMPs include, but are not limited to: silt fencing, sandbags, straw bale barriers, fiber rolls, geotextiles, and wind erosion control. Site data sources include aerial photography, USGS maps, and the County of Los Angeles Hydrology Manual.
- Cement, concrete, washings, asphalt, paint, oil/other petroleum products, or any other substances which could be hazardous to aquatic life, shall be prevented from contaminating the soil and/or entering any drainages.
- A Storm Water Pollution Prevention Plan (SWPPP) and erosion control plan would be required. This plan would incorporate recommendations and approval from the Regional Water Quality Control Board (RWQCB). These plans would be submitted to the Resident Engineer (RE) for approval.
- During final design a water diversion plan would be prepared, and, upon approval and implementation, would help to avoid potential impacts to water quality within the wetted channel of the streambed.

## **2.11 GEOLOGY / SOILS / SEISMIC / TOPOGRAPHY**

### **2.11.1 Regulatory Setting**

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples

of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE) from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

### **2.11.2 Affected Environment**

A review by the Caltrans Office of Geotechnical Design was undertaken and it was determined that the Preliminary Foundation Recommendations memo prepared in October of 2007 remains valid for this project.

The Pacific and North American plates converge in this area along an eastward-trending bend in the San Andreas Fault. The geologic compression caused by the merging of these two plates is expressed primarily in a north-south direction, forcing the region together. The result is uplift in some areas, which forms the San Gabriel Mountains, and depressions in other areas, forming basins.

The San Gabriel Range is one of several mountain ranges in Southern California that make up the Transverse Ranges. The Transverse Ranges run east-west, which is crosswise to nearly all other ranges and valleys in California.

The transverse nature of the San Gabriel Mountains and their extreme elevation change creates diverse climatic conditions and habitat. Elevation in the upper watershed ranges from just 700 feet above sea level in Azusa to the peak of Mt. Baldy at over 10,000 feet high. The San Gabriel Mountains are separated from the surrounding landscape by a network of major faults, including the San Andreas Fault on the north and the San Gabriel and Sierra Madre faults on the south. The San Gabriel Range is also fractured by many subsidiary faults. Most of the parent bedrock is igneous, but the rocks are highly fractured and weathered, decomposing rapidly when exposed to the elements.<sup>11</sup>

The rugged relief and active downstream cutting suggests a region in a relatively young stage of erosion. Based on the 1996 Caltrans Seismic Hazard Map, the San Gabriel Fault, which is a reverse/ oblique fault, is the controlling fault for this site.

Soils around the project site consists of moderately deep, well drained soils formed in material weathered from granitic, gneiss, amphibolite, sandstone or schist rocks on mountain slopes and older stream terraces.

The parent material in the immediate project area consists of landslide and talus rubble that overlies late Mesozoic Quartz diorite. The stream channel material consists of loose sand, gravel, and cobbles with local silt and clay binders, dispersed among boulders reaching ten feet in diameter. The geologic features of the region suggest the area is in a geomorphically young stage of erosion.<sup>12</sup>

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<sup>11</sup> [http://dpw.lacounty.gov/wmd/Watershed/sg/mp/docs/SGR\\_MP-Chapter2-1.pdf](http://dpw.lacounty.gov/wmd/Watershed/sg/mp/docs/SGR_MP-Chapter2-1.pdf)

<sup>12</sup> [http://dpw.lacounty.gov/wmd/Watershed/sg/mp/docs/SGR\\_MP-Chapter2-1.pdf](http://dpw.lacounty.gov/wmd/Watershed/sg/mp/docs/SGR_MP-Chapter2-1.pdf)

The liquefaction potential at this site is considered moderate to high due to the estimated highest groundwater level at 2,972 feet and the presence of loose to medium dense sand and silt.

The staging area adjacent to the bridge is highly disturbed and consists of deposits of rock debris and disturbed sections. Adjacent slopes have been graded in the past for installation of the bridge at this location.

### **2.11.3 Environmental Consequences**

The Moment Magnitude of the Maximum Credible Earthquake (MCE) is 7.5 for this fault site, and can be found 1.93 miles (3.1 km) from the proposed project site. However, according to The California Department of Conservation, the proposed project site is not within any Earthquake Fault Zone. There is no fault crossing or extending directly toward the project site, and therefore the potential for ground rupture hazard at this site is considered low.

The Caltrans Division of Engineering Services, Office of Geotechnical Design, has determined that ground shaking, ground rupture, and liquefaction all have the potential to occur, but implementation of the proposed project would not increase or decrease the potential for design failure as a result of the aforementioned.

The project area has a history of landslides. Major landslides have occurred over the last several decades. Implementation of the proposed project would not increase or decrease the potential for such landslides.

### **2.11.4 Avoidance, Minimization, and/or Mitigation Measures**

The bridge structure would be designed and built to withstand earthquakes and ground movement according to current technology and design details.

Upon completion of the project, the stream channel and rock levee would be re-contoured to match the existing topography of the streambed and adjacent slopes.

## **2.12 HAZARDOUS WASTE/MATERIALS**

### **2.12.1 Regulatory Setting**

Hazardous waste and hazardous materials are regulated by many state and federal laws that include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act

- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

### **2.12.2 Affected Environment**

An Initial Site Assessment (ISA)/Hazardous Waste Assessment was prepared on October 2, 2007 that was based on a site visit on September 18, 2007 and available project information. The bridge was built in 1967, but has only been only open for limited access since 2002 due to fire activity and erosion.

According to the ISA/Hazardous Waste Assessment prepared by Caltrans' Hazardous Waste branch, the bridge structure contains traffic striping which is known to have the potential to contain hazardous levels of lead and chromium if the stripes are removed by themselves. It is also possible that the bridge structure may contain Asbestos Containing Materials (ACM).

### **2.12.3 Environmental Consequences**

For both alternatives, contamination in groundwater at the project site is not anticipated.

There is a potential of Asbestos Containing Material (ACM) in the structure, so testing during the construction phase may be necessary.

Aerially Deposited Lead is not a concern in the unpaved areas of this project because of the very low volume of traffic and continuous erosion in the area.

### **2.12.4 Avoidance, Minimization, and/or Mitigation Measures**

There is a possibility that yellow thermoplastic/paint striping that needs to be removed may contain lead and chromium at concentrations that are considered hazardous and may require disposal at a Class I facility. In areas where the yellow traffic stripes are being removed along with asphalt or concrete, the lead concentration may be diluted enough so that disposal to a Class I facility may not be necessary. Once the traffic stripe removal method is finalized, final analyses of lead and chromium concentration levels will determine whether the waste can be

relinquished to the contractor for possible recycling or will need to be disposed of at a Class I facility.

Testing for Asbestos Containing Materials (ACM) would be done during construction. If ACM is found, a permit may be required from the regional Air Quality Management District prior to any work on the structure. Compliance with the permit conditions would avoid or minimize any potential impacts.

If the proposed project requires dewatering of groundwater during construction, a Site Investigation would be required to characterize local groundwater quality and a Construction Dewatering Permit would need to be obtained from the Regional Water Quality Control Board. Compliance with the permit conditions would avoid or minimize any potential impacts.

## **2.13 AIR QUALITY**

### **2.13.1 Regulatory Setting**

The Clean Air Act as amended in 1990 is the federal law that governs air quality. The measure that is California-specific is the California Clean Air Act of 1988. These laws set standards for the quantity of various pollutants that are legally allowed in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM), lead (Pb), and sulfur dioxide (SO<sub>2</sub>).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for these pollutants listed above. California is in attainment for all of the criteria pollutants except for: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), and particulate matter (PM). At the regional level, Regional Transportation Plans (RTPs) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Southern California Association of Governments (SCAG) for Los Angeles County, and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to have met regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant pollutant standard.

Areas that were previously designated as nonattainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA and CEQA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in nonattainment areas, the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

### **2.13.2 Affected Environment**

An Air Quality Review was completed on September 25, 2008, and according to the *Transportation Project-Level Carbon Monoxide Protocol* and 40 CFR 93.126, published in the Federal Register on July 1, 2004, it was confirmed that the proposed project is exempt from air quality emission analyses. The proposed project was found to be exempt from project-level conformity requirements. The Office of Environmental Engineering and Corridor Studies (OEECS), Air Quality Branch (AQB) has completed the appropriate review.

The proposed project is located in the Angeles National Forest in the San Gabriel Mountain Range, which falls within the South Coast Air Basin (SCAB). The SCAB is comprised of parts of Los Angeles, Riverside, and San Bernardino counties and all of Orange County, and is bound on the west by the Pacific Ocean and surrounded on the other sides by mountains, including the San Gabriel Mountains. The mountains trend east-west, but hills along the San Andreas fault trend west-northwest. The subsection elevation ranges from about 500 feet up to 6,000 feet and the mountains tend to channel and confine airflow and trap air pollutants in the basin to the south.

Southern California frequently has temperature inversions that inhibit the dispersion of pollutants. Inversions may be either ground-based or elevated. Ground-based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur adjacent to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the South Coast Air Basin (SCAB) and is responsible for the high levels of ozone observed during summer months in the air basin.

Santa Ana winds have a strong effect on the local climate. They are strong, extremely dry offshore winds that characteristically sweep through Southern California and northern Baja California in late fall into winter, and can often create ideal wildfire conditions in the project study area and the Angeles National Forest. The winds are remembered most for the hot, dry weather that they bring in the fall. Wildfires that are often a result of Santa Ana wind events are a major contributor to “bad air days” throughout the SCAB.

Since the passage of the Federal Clean Air Act of 1970 (FCAA) and subsequent amendments, the U.S. EPA has established and revised the National Ambient Air Quality Standards (NAAQS). The NAAQS was established for six major pollutants or criteria pollutants. Ambient air quality standards (AAQS) define clean air, and are established to protect even the most sensitive individuals in communities. An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. California law authorizes the Air Resources Board (ARB) to set ambient (outdoor) air pollution standards

(California Health & Safety Code section 39606) in consideration of public health, safety and welfare.

The NAAQS are two tiered: primarily: to protect public health, and secondary: to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property). The six criteria pollutants are ozone (O<sub>3</sub>), carbon monoxide (CO), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). Table 2.13-2 presents the state and national ambient air quality standards.

Ozone (O<sub>3</sub>):

Ozone is a toxic gas that irritates the lungs and damages materials and vegetation. Ozone is a secondary pollutant, meaning it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO<sub>2</sub>, which occur only in the presence of bright sunlight. Pollutants emitted from city areas react during transport downwind to produce the oxidant concentrations experienced in the area.

Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>):

Particulate matter includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are those particles between 10 and 2.5 microns in size (PM<sub>10</sub>) and smaller than or equal to 2.5 microns (PM<sub>2.5</sub>). The size of the particulate matter is referenced to the aerodynamic diameter of the particulate. The PM<sub>10</sub> criteria is aimed primarily at what the U.S. EPA refers to as "coarse particles." Coarse particles are often found near roadways, dusty industries, construction sites, and fires. The PM<sub>2.5</sub> criteria, which are directed at particles less than 2.5 microns in size, are referred to as "fine particles." These particles can also be directly emitted and they can also form when gases emitted from power plants, industries and automobiles react in the air. The principal health effect of airborne particulate matter is on the respiratory system. Studies have linked particulate pollution with irritation of the airways, coughing, aggravated asthma, irregular heartbeat, and premature death in people with heart or lung disease.

Carbon Monoxide (CO):

Carbon monoxide is a colorless and odorless gas, which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Carbon monoxide combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High carbon monoxide concentrations can lead to headaches, aggravation of cardiovascular disease, and impairment of central nervous system functions. Carbon monoxide concentrations can vary greatly over comparatively short distances. Relatively high concentrations are typically found near crowded intersections, along heavily used roadways carrying slow moving traffic, and at or near ground level. Even under the most severe meteorological and traffic conditions, high concentrations of carbon monoxide are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall carbon monoxide emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

Nitrogen Oxides (NO<sub>x</sub>):

Nitrogen oxides from automotive sources are some of the precursors in the formation of ozone and secondary particulate matter. Ozone and particulate matter are formed through a series of photochemical reactions in the atmosphere. Because the reactions are slow and occur as the pollutants are diffusing downwind, elevated ozone levels are

often found many miles from the source of the precursor emission. The effects of nitrogen oxide emissions are examined on a regional basis.

Lead (Pb):

Lead is a stable compound, which persists and accumulates both in the environment and in animals. In humans, it affects the blood forming or hematopoietic, the nervous, and the renal systems. In addition, lead has been shown to affect the normal functions of the reproductive, endocrine, hepatic, cardiovascular, immunological, and gastrointestinal systems, although there is significant individual variability in response to lead exposure. Since 1975, lead emissions have been in decline due in part to the introduction of catalyst-equipped vehicles, and decline in production of leaded gasoline. In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant (i.e. lead smelters) and are not applied to transportation projects.

Sulfur Oxides (SO<sub>x</sub>):

Sulfur oxides constitute a class of compounds of which sulfur dioxide (SO<sub>2</sub>) and sulfur trioxide (SO<sub>3</sub>) are of greatest importance. The oxides are formed during combustion of the sulfur components in motor fuels. Relatively few sulfur oxides are emitted from motor vehicles since motor fuels are now de-sulfured. The health effects of sulfur oxides include respiratory illness, damage to the respiratory tract, and bronchia-constriction.

**Table 2.13-2. Ambient Air Quality Standards**

Pollutant	Averaging Time	State Standards <sup>1,3</sup>	Federal Standards <sup>2</sup>	
			Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>
Ozone (O <sub>3</sub> )	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	--	--
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.08 ppm (157 µg/m <sup>3</sup> )	Same as Primary
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>8</sup>	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary
	AAM <sup>6</sup>	20 µg/m <sup>3</sup>	--	Same as Primary
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>8</sup>	24 Hour	--	35 µg/m <sup>3</sup>	Same as Primary
	AAM <sup>6</sup>	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	Same as Primary
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	None
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	None
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )	--	--
Nitrogen Dioxide (NO <sub>2</sub> )	AAM <sup>6</sup>	0.030 ppm (56 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary
	1 Hour	0.18 ppm (338 µg/m <sup>3</sup> )	--	--
Sulfur Dioxide (SO <sub>2</sub> )	AAM <sup>6</sup>	--	0.030 ppm (80 µg/m <sup>3</sup> )	--
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (365 µg/m <sup>3</sup> )	--
	3 Hour	--	--	0.5 ppm (1,300 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	--	--
Lead <sup>7</sup>	30 day Avg.	1.5 µg/m <sup>3</sup>	--	--
	Calendar Quarter	--	1.5 µg/m <sup>3</sup>	Same as Primary
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km -- ≥30 miles for Lake Tahoe)	<b>No Federal Standards</b>	
Sulfates	24 Hour	25 µg/m <sup>3</sup>		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )		
Vinyl Chloride <sup>7</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )		

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded.

2. National standards (other than ozone, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

5. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

6. Annual Arithmetic Mean

7. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

8. On September 21, 2006 EPA published a final rule revoking the annual 50 µg/m<sup>3</sup> PM<sub>10</sub> standard and lowering the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup>. Attainment designations are to be issued in December, 2009 with attainment plans due April, 2010.

-- No Standard

**2.13.3 Environmental Consequences**

There is a potential for temporary, short-term construction impacts in the form of dust and other airborne debris during construction staging, grading, equipment access, and demolition activities.

## **Regional Air Quality Conformity**

Per 40 CFR 93.126 published in the Federal Register (volume 69, page 40004) on July 1, 2004, Table 2 allows certain projects to be exempt from all emissions analyses. The proposed project is listed in Table 2 under the subtitle "Safety" as the following classification: "widening narrow pavements or reconstructing bridges" (with no additional travel lanes). This proposed project has been included in the 2008 Regional Transportation Improvement Program (RTIP).

The *Transportation Project-Level Carbon Monoxide Protocol* indicates that the proposed project is unlikely to result in an adverse impact to ambient Carbon Monoxide. The proposed project is not expected to result in an increase of diesel vehicles or increase in vehicle idling and therefore have a neutral impact on PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Pursuant to 40 CFR 93.126, this project is deemed exempt from the requirement to determine conformity.

The proposed project is not anticipated to result in any meaningful changes to traffic volumes, vehicle mix, location of the existing facility, or any other factors that would cause an increase in impacts relative to the No-Build alternative.

### **2.13.4 Avoidance, Minimization, and/or Mitigation Measures**

Most of the construction impacts to air quality are short-term in duration and therefore will not result in adverse or long-term conditions. Implementation of the following measures would reduce any air quality impacts resulting from construction activities:

The construction contractor shall comply with Caltrans' Standard Specifications Section 7-1.01F and Section 10 of Caltrans' Standard Specifications (1999).

- Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as: air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; and convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
- Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.
- All grading and excavation material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment would include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary and reclaimed water used whenever possible.
- All trucks shall be required to cover their loads as required by California Vehicle Code 23114.
- The proposed project is located within the South Coast Air Quality Management District and will need to comply with the Fugitive Dust Implementation Rule 403 to alleviate temporary emissions during project construction. A "Fugitive Dust Mitigation Plan" shall be developed and adopted for the project if applicable.
- The applicant shall notify the District prior to issuance of demolition permits for any onsite structures. Demolition and/or renovation activities shall be conducted in compliance with District Rule 62.7, Asbestos – Demolition and Renovation

The purpose of this project is to do scour mitigation and seismic retrofit through construction of steel column casings, footing retrofit with steel piles, retaining walls along the stream, check dams, rock slope protection, and bridge rail replacement. This project would not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. As such, FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSTAT concerns. Consequently, this effort is exempt from analysis for MSATs.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSATs to decline significantly over the next 20 years. Even after accounting for a 64 percent increase in VMT, FHWA predicts MSATs will decline in the range of 57 percent to 97 percent, from 2000 to 2020, based on regulations now in effect, even with a projected 64 percent increase in VMT. This will both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project.

## **2.14 NOISE AND VIBRATION**

### **2.14.1 Regulatory Setting**

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

#### ***CALIFORNIA ENVIRONMENTAL QUALITY ACT***

CEQA requires a strict baseline versus post-project analysis to assess whether a proposed project will have a noise impact. Setting is relevant for the CEQA noise analysis in terms of analyzing the surrounding land use and number and type of receptors. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

#### ***NATIONAL ENVIRONMENTAL POLICY ACT AND 23 CFR 772***

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differs depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

**Table 2.14-1: Noise Abatement Criteria**

Activity Category	NAC, Hourly A- Weighted Noise Level, dBA L <sub>eq</sub> (h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	–	Undeveloped lands.
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Table 2.14-2 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

**Table 2.14-2: Noise Levels of Common Activities**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft) Commercial Area	70	Vacuum Cleaner at 3 m (10 ft)
Heavy Traffic at 90 m (300 ft)	60	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	50	Large Business Office
Quiet Urban Nighttime	40	Dishwasher Next Room
Quiet Suburban Nighttime	30	Theater, Large Conference Room (Background)
Quiet Rural Nighttime	20	Library
	10	Bedroom at Night, Concert Hall (Background)
	0	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the

NAC is defined as coming within 1 dBA of the NAC-designated noise level for the type of land use or activity being analyzed.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is essentially an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination can be thought of a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

### **2.14.2 Affected Environment**

The Angeles National Forest consists of open space and undeveloped land with no sensitive noise receptors in the project vicinity. The existing ambient noise levels were not measured for predicted future traffic and construction noise levels because the road has been closed since 1978.

A Type I project is defined by 23 CFR 772 as "A proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through traffic lanes." Coordination with the Caltrans Noise and Vibration branch to determine the noise and vibration effects of the proposed project occurred on September 19, 2008, and it was determined that this project is not considered a Type I project. According to the Noise Abatement Criteria (NAC) Table, the proposed project falls under activity category D, undeveloped lands, which does not have an established hourly weighted noise level.

### **2.14.3 Environmental Consequences**

The proposed project would not expose persons or result in the generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The project would not increase the number of through lanes, increase capacity or change the horizontal or vertical alignment of the roadway, and is not considered a Type 1 project. FHWA regulations (23CFR772) state that noise abatement will usually be necessary where noise impacts are predicted and only where frequent human use occurs, and where a lowered noise level would be of benefit. Since this project is not a Type 1 project, only traffic and construction noise abatement are addressed.

Temporary construction noise is anticipated as a result of this project due to operation of equipment and demolition/removal of the existing bridge pier. Construction of this project would require the use of heavy equipment with high noise level characteristics. Typically, construction equipment ranges from concrete mixers and generators producing noise levels in the 80-decibel range from the source to jackhammers at over 90 decibels.

Potential noise impacts to wildlife species are further addressed in the Biological Environmental section below.

#### **2.14.4 Avoidance, Minimization, and/or Mitigation Measures**

Since this project is not a Type 1 project, the following measures would minimize temporary construction noise impacts:

Equipment Noise Abatement should be applied to old equipment so that both old and new equipment noise levels are attenuated.

Implementation of all appropriate sound control requirements identified in the Caltrans Standard Specifications section 7-1.011. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

Construction activities would be limited to daylight hours to minimize harm resulting from noise to local wildlife species.

The construction noise minimization measures would be finalized once an alternative is chosen and design plans are fully completed.

### **BIOLOGICAL ENVIRONMENT**

This section is divided into the following subsections, which summarize the results of the NES:

- ◆ Natural Communities
- ◆ Wetlands and Other Waters
- ◆ Plant Species
- ◆ Animal Species
- ◆ Threatened & Endangered Species
- ◆ Invasive Species

For each of the above-mentioned subsections, the analysis will begin with a discussion of the regulatory setting (the background of why issues are analyzed the way they are), then move to a discussion of the affected environment (existing conditions), followed by a discussion of the project's potential impacts to the environment. The subsection will conclude with a discussion of the proposed project's measures to minimize harm.

The impact discussions will focus on the effects of implementation of the proposed project on plant communities, common and special-status plant and wildlife species, special-status habitats and wildlife movement corridors. Impacts on these resources are generally discussed in terms of the effect of project related activities on the natural/biological communities.

A Natural Environment Study (NES) was prepared in February 2009 to assess the biological resources that would be affected by the proposed project and has been used for all ensuing analyses in the Biological Environment subsections of the document. The NES was prepared by Caltrans' staff biologists and was based on a review of project plans, aerial photographs, United States Geological Surveys 7.5 minute topographic quadrangle maps, California Natural Diversity Database (CNDDDB) information, literature review, field surveys and applicable studies completed for adjacent projects. Biological resources refer to drainages, plant and animal species, wetlands, and natural communities.

The biological study area was defined by a review of the 2008 update of the California Natural Diversity Database (CNDDDB) and the 2008 California Native Plant Society (CNPS) electronic database of Waterman Mountain, Crystal Lake, Mount San Antonio, Azusa, Glendora and Mount Baldy. USGS 7.5-minute quadrangle maps were reviewed to identify special-status plant and wildlife species (those species considered Rare, Threatened, Endangered, or otherwise sensitive by various state and federal resource agencies) that have been known to historically occur in the

vicinity of the project site. Photographs and a review of existing literature were reviewed to gain additional information of the project location.

Other data sources reviewed include: environmental documentation from other Caltrans projects in the vicinity and historical biological studies for the project location. These studies include:

- Focused Presence/Absence Surveys for Plants: David Bramlet, Scott White and Steve Boyd (Bramlet et al., 1998)
- Mammals and Reptiles: Highway 39 Mammal and Reptile Survey for the U.S.D.A. Forest Service (Wales, 1998)
- Birds: Southwestern Willow Flycatcher and Bell's Vireo (Bloom Biological Consulting, 2001), Habitat Assessment for the Southwestern Willow Flycatcher along the Closed Portion of State Route 39 (Tierra Madre Consultants, Inc., 1998), General Avian Surveys along State Route 39 (House, 1998)

The specific impact zone of the proposed project along SR-39 is based on the location of the bridge and access points and staging areas. Direct impacts, including temporary and permanent, are expected to be contained within 500 feet up and downstream of the bridge and within 100 feet from the edge of the existing roadway. Although minor modifications to the design of the proposed project may occur, it is not expected that these changes would result in additional impacts. Therefore, for the purpose of this biological analysis, the study area can be defined as including 100 feet on both sides of the existing roadway edge and 500 feet upstream and downstream of the bridge. Due to the sensitive nature of some of the wildlife in the area, the potential water quality, noise, and visual impact areas have been expanded so that their coverage includes areas beyond 100 feet of the roadway.

## **2.15 NATURAL COMMUNITIES**

### **2.15.1 Regulatory Setting**

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage issues, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in the Threatened and Endangered Species Section 2.19, and Wetlands and Other Waters are discussed in Section 2.16.

### **2.15.2 Affected Environment**

The area that is now known as the Angeles National Forest was originally set aside for watershed protection in 1892, as the first timber reserve in California. The importance of the land was recognized, and soon after, the San Gabriel Timberland Reserve (SGTR) was established through executive order, which was the first acknowledgement that current and future residents of Los Angeles would benefit from forest protection. Today, the forest provides residents of Los Angeles County with 35 percent of their drinking water and 70 percent of their open space.<sup>13</sup>

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<sup>13</sup> United States Forest Service, *Angeles National Forest Business Plan, Forest Overview* <http://www.fs.fed.us/r5/business-plans/angeles/introduction/overview.html> (January 8, 2009).

## PLANT COMMUNITIES

**Riparian Scrub:** Riparian scrub was observed upstream and downstream within the study area but outside of the proposed project's impact area. This community consists of fairly dense stands of arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), mulefat, Mexican elderberry, pipestem virgin's bower and pink-flowered currant. Sub-dominant species include white alder (*Alnus rhombifolia*), California bay laurel (*Umbellularia californiaca*) and Fremont cottonwood (*Populus fremontii*).

Herbaceous species in this riparian area included: sedges, scarlet monkey flower, showy monkey flower, California goldenrod, Durango root, Greene's cinquefoil, Hooker's evening primrose, green willow herb and white yarrow.

**Mixed Montane Chaparral:** Montane chaparral is uncommon and scattered throughout the study area, existing mostly west of the existing road. The co-dominant plants found in this community are southern deer brush, Parry's manzanita, chaparral whitethorn (*Ceanothus leucoermis*) and rosemary flat-topped buckwheat. Subdominant plants are chaparral yucca, poodledog bush (*Turricula parryi*), rubber rabbitbrush, California brickellbush, orangebush monkey flower, snow bush, deerweed (*Lotus scoparius*) and curly-leaf mountain mohogany. Another plant present, but uncommonly found in this community is canyon live oak.

The understory is comprised of Martin's paintbrush, Grinnell's penstemon, cheat grass, white everlasting (*Gnaphalium canescens*), golden yarrow, Malapias blue grass, giant blazing star, foxtail fescue (*Vulpia myuros*), Davidson's buckwheat, splendid gilia (*Gilia splendens*), rough muilla (*Mullia maritime*), cobweb thistle (*Cirsium occidentale*), prickly cryptantha, field suncup (*Camissonia hirtella*) and strigose lotus (*Lotus strigosus*).

**Ruderal (Invasive Plant Species):** Non-native annual plant species occur along areas directly adjacent to the existing roadway. Dominant plant species in these areas include cheat grass, Jerusalem oak (*Chenopodium botrys*), ripgut brome (*Bromus diandrus*), yard knotweed (*Polygonum arenastrum*), Fremont's goosefoot (*Chenopodium fremontii*), foxtail fescue, jimson weed (*Datura wrightii*), summer mustard (*Brassica geniculata*), Russian thistle (*Salsola tragus*), weedy cudweed and Indian tree tobacco (*Nicotiana glauca*). These plant species are common to ruderal areas. Subdominant plants species observed within these areas include native plant species such as rubber rabbitbrush, Parish's buckwheat, prickly poppy, California fuchsia, Nevada lotus (*Lotus nevadensis*), happy plant, Mojave linanthus and rock buckwheat.

The vegetation community in the eastern portion of the Angeles National Forest is broadly classified as a mix of coastal foothills landscape and lower montane landscape. The project area was burned by the severe Curve Fire in 2002, and is composed of patches of older vegetation stands that survived the fire along with young stands of post-successional vegetation.

**Wildlife Movement Corridors/Fish Passage:** Wildlife movement corridors are linkages of natural habitat between larger areas that are not contiguous or otherwise connected. Wildlife movement is essential to wildlife survival, including day-to-day movements of individuals seeking shelter, food, mates, or the migration of organisms to avoid seasonally unfavorable conditions. Movements can lead to recolonization of unoccupied habitats after environmental disturbances and promote the healthy mixing of genes among separated populations.

Fragmentation of habitat occurs when a given species is unable to cross a given area (in this case, a road) that is used to connect to another place of food, habitat, or other means that are needed to support their individual life-cycle requirements. This division occurs when animals avoid, are unable to cross, or are killed when trying to cross a road. The result is a barrier effect that impacts the flora and fauna of an area, resulting in a change to their behavioral habits.

The proposed project site is located within a large contiguous open space area of the Angeles National Forest in the San Gabriel Mountains. As such, there are no regional corridors linking two or more non-contiguous areas of natural habitat within the region of the project site.

Because of the vast contiguous open space that occurs in all directions around the project site, SR-39 itself should not be considered a barrier to a wildlife movement corridor linking two otherwise disconnected open spaces. Rather it is considered one of many possible localized travel routes available to large and medium-sized mammals.

### **2.15.3 Environmental Consequences**

The project area includes approximately 1.3 acres of habitat that would be used for a staging area, access road, and construction activities.

**Riparian Herb and Scrub:** Riparian herb and scrub habitat occurs up and down-slope from the existing roadway and the proposed project area. The implementation of the proposed project is not expected to directly impact this plant community. However, impacts could occur from erosion from water runoff caused from construction activities. Because this habitat is typically associated with jurisdictional resources and special-status species could occur here in the future, there is a possibility for a potential impact if excessive water runoff or rockslides occur during the construction phase.

Construction design has incorporated measures to reduce the potential for the run-off of sediment during the construction phase by installing silt fencing and berms. With these measures incorporated into the project design, impacts are not expected to this plant community with the implementation of the proposed project.

**Mixed Montane Chaparral:** The direct impact of implementation of the proposed project on mixed montane chaparral would not permanently convert any areas.

No special-status plant or animal species were observed within this habitat type. Because no special-status plant or animal species were observed during field studies, and because this community is not considered to be sensitive by resource agencies, the amount of habitat affected is minor in comparison to the surrounding area.

**Ruderal (Invasive Plant Species):** There would be 1.3 acres that would be affected due to the implementation of the proposed project on this habitat. However, the existing habitat is highly disturbed by past construction activities and infrequent maintenance. Small amounts of ruderal vegetation exists, and there is little available habitat on the site for animals to nest or roost and little opportunity for wildlife to forage. The biological value of this area is considered low, and because no special-status resources occur in this vicinity, the loss of this habitat would be minimal.

Another consideration regarding invasive plant species when evaluating impacts is the effect the proposed project may have on increasing the propagation of non-native invasive plant species. Following a disturbance to the soil of any natural habitat, a plant succession follows over time. As typical with most areas within the region of the project site, more aggressive, rapid growth, non-native species would become established instead of native species after a soil disturbance which would alter conditions and make it difficult for native plants to re-grow. The project proposes improvements within areas that have been previously disturbed by the construction of the existing road and ongoing maintenance. With a few relatively minor exceptions, intrusion of non-native plant species is not expected into areas that were not already disturbed.

No special-status plant communities were identified in the proposed project area and as a result, impacts to special-status plant communities are not anticipated.

**Wildlife Movement Corridors/ Fish Passage:** A temporary stream diversion would be constructed to minimize potential impacts to fish species. A natural bottom diversion would be considered to minimize impacts.

#### **2.15.4 Avoidance, Minimization, and/or Mitigation Measures**

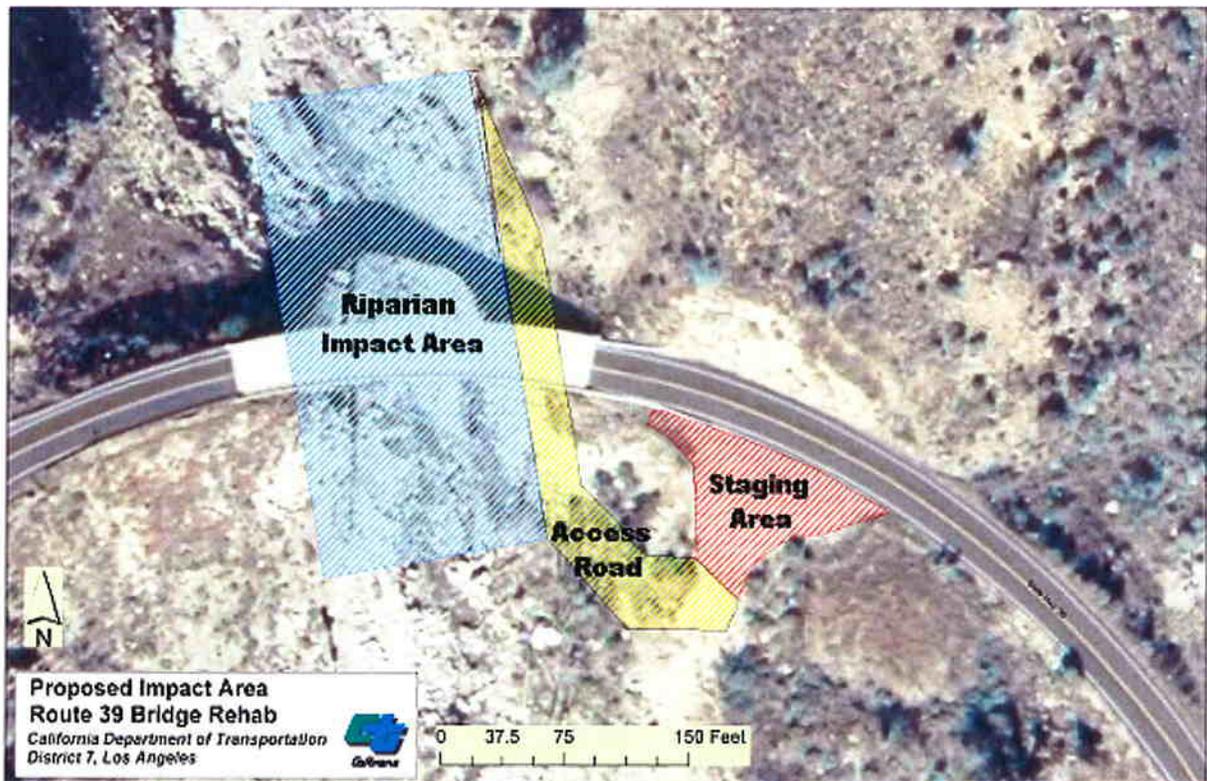
Prior to clearing or construction, highly visible barriers (such as orange construction fencing) would be installed around and directly adjacent to the project footprint to designate Environmentally Sensitive Areas (ESAs) to be preserved. No grading or fill activity of any type would be permitted and heavy equipment, including motor vehicles, would not be allowed to operate within the ESAs.

All construction equipment would be operated to avoid accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, would be allowed within these protected zones. Silt fence barriers would be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.

Inspection and cleaning of construction equipment would be performed to minimize the importation of non-native plant material, and eradication strategies (i.e., weed abatement programs) would be employed should an invasion occur.

A biologist would monitor construction activities for the duration of the project to ensure that vegetation removal, Best Management Practices (BMPs), ESAs, and all avoidance and minimization measures are properly followed.

**Figure 8: Proposed Impact Area**



## **2.16 WETLANDS AND OTHER WATERS**

### **2.16.1 Regulatory Setting**

Wetlands and other waters are protected under numerous federal and state-level laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that upholds that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment, or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (ACOE) with oversight by the Environmental Protection Agency (EPA).

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Broadly, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. If DFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section (Section 2.10) for additional details.

### **2.16.2 Affected Environment**

Biological surveys determined that this area met only two of the three required parameters in order to be categorized as a federally designated wetland. Wetland hydrology and hydrophytic vegetation were present; however, hydric soils were not present within the boulder and cobble streambed. Final concurrence with the Army Corps of Engineers would be sought to determine a non-jurisdictional federal wetland. The North Fork San Gabriel River falls under the jurisdiction of the CDFG definition of a streambed, which includes the riparian vegetation area, streambed, and banks.

### **2.16.3 Environmental Consequences**

The proposed project would involve temporary construction activities within and adjacent to the North Fork San Gabriel River streambed. The total disturbed soil area (DSA) for this project is approximately 1.3 acres. The DSA was calculated accounting for project site access, a staging area, temporary road access to the riverbed, construction area activities, and river diversion. The proposed project would also involve a temporary stream diversion.

Potential impacts to the state jurisdictional streambed would include alterations during removal of a portion of the bridge column and gaining equipment access to the damaged bridge footing, and all construction activities within the streambed. The anticipated impact area would be considered a direct temporary impact.

### **2.16.4 Avoidance, Minimization, and/or Mitigation Measures**

A stream diversion would be implemented in order to avoid impacts to the active channel. The diversion plan would be designed in coordination with an experienced aquatic ecologist.

Caltrans would coordinate with regulatory agencies to secure permits for work within the streambed, and waters of the United States. Potential impacts to the streambed and waters of the U.S. would be minimized, as Caltrans would comply with all required permit conditions from appropriate regulatory agencies in order to avoid or minimize impacts.

## **2.17 PLANT SPECIES**

### **2.17.1 Regulatory Setting**

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) share regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species (Section 2.19) in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et. seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et. seq. Department projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

### **2.17.2 Affected Environment**

Listed and sensitive plant species may have the potential to occur in the same general area as the proposed project according to State (CDFG) and Federal (USFS and USFWS) species list databases and habitat model maps. Please refer to the Natural Communities subsection (2.15) for more detailed information.

A total of three plant communities were observed along the portion of SR-39 within the study area, as discussed in the Natural Communities section. The communities are: (1) riparian scrub, (2) mixed montane chaparral, and (3) ruderal. The classification of these communities generally follows The Department of Fish and Game's Vegetation Classification and Mapping Program "List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database" (Sept 2003 Edition).

### **2.17.3 Environmental Consequences**

Impacts to vegetation may occur in the form of crushing of plants and tree sprouts from foot traffic and construction equipment especially by creating temporary access to the riverbed and diverting the stream away from existing vegetation.

Surveys concluded that the proposed project would not impact State and Federal sensitive plant species within the project area, due to absence of sensitive plant species within the highly disturbed project staging area, access road, and streambed/riparian area.

Because the plant communities within the project boundaries are not protected by any Federal, State, or local regulations, there are no impacts to any designated critical habitat.

### **2.17.4 Avoidance, Minimization, and/or Mitigation Measures**

A landscape plan would be developed to revegetate any areas where plants were removed within the project area. The plant palette would include native plant species typical of the surrounding area.

## **2.18 ANIMAL SPECIES**

### **2.18.1 Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NOAA Fisheries) and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.19 below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, as well as USFWS or NOAA Fisheries candidate species.

**Federal laws** and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

**State laws** and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

In addition to state and federal laws regulating impacts to wildlife, there are often local regulations (example: county or city) that need to be considered when developing projects. If work is being done on federal land (BLM or Forest Service, for example), then those agencies' regulations, policies, and Habitat Conservation Plans are followed.

**2.18.2 Affected Environment**

Common Wildlife Resources:

Discussed below are representative common wildlife species (those not provided a sensitivity status by regulatory agencies) that were observed on the project site during the field surveys. Because wildlife typically utilize a variety of plant communities, wildlife species observed or likely to occur on the site are described by taxonomic group. A list of wildlife species observed within the project area is provided below in table 2.18-2.

**Table 2.18-2:** Wildlife Species Observed Within the Project Area

<b>Scientific Name</b>	<b>Common Name</b>
<b>CLASS INSECTA</b>	<b>INSECTS</b>
Family Vespidae	Yellow jacket/wasp species
Suborder Eiprocta	Dragon fly species
Order Lepidoptera	Butterfly species
<b>CLASS REPTILIA</b>	<b>REPTILES</b>
<i>Sceloporus occidentalis</i>	Western fence lizard
<b>CLASS ACTINOPTERYGII</b>	<b>RAY-FINNED FISHES</b>
<i>Oncorhynchus mykiss</i>	Rainbow trout
<b>CLASS AVES</b>	<b>BIRDS</b>
<i>Catherpes mexicanus</i>	Canyon wren
<b>CLASS MAMMALIA</b>	<b>MAMMALS</b>
<i>Canis latrans</i>	Coyote (scat)
<i>Ocodoileus hemionus</i>	Deer species (tracks)
<i>Ursus americanus</i>	Bear species (scat)
Order Chiroptera	Bat species (scat)

Amphibians and Reptiles:

The project site is located along the North Fork of the San Gabriel River. Natural springs along SR-39 provide a source of water throughout the spring, summer, and fall, and likely become limited during the winter due to snowfall and periodic freezing temperatures. These springs provide a constant source of water throughout the amphibian breeding period; however, they are relatively small and provide a limited resource for breeding.

Amphibian populations on the project site are expected to be low or non-existent due to the lack of larger bodies of continuous available water. If present, it is expected that they would be localized around the available water sources. No observances of amphibian species have been made by Caltrans biologists or documented in the preliminary surveys conducted by ECORP biological consultants in December 2008.

Common reptile species observed on the site include: western whiptail (*Cnemidophorus tigris*), sagebrush lizard (*Sceloporus graciosus*) and side-bloched lizard (*Uta stansburiana*).

#### Birds:

The diversity of plant communities present on site provides both forage and nesting habitat for several locally occurring common bird species. Some species are known to be closely associated with specific plant communities whereas others utilize a variety of plant communities for foraging and nesting. All required community types may not be present in the project area.

Common birds observed on the project site include Hammond's flycatcher (*Empidonax hammondi*), Western scrub-jay (*Aphelocoma californica*), Spotted towhee (*Pipilo maculatus*) cliff swallow (*Petrochelidon pyrrhonota*), and red-tailed hawk (*Buteo jamaicensis*).

#### Mammals:

A variety of mammal species occur in the vicinity of the site. Large species including mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*) and black bear (*Ursus americanus*) were observed or detected by scat, tracks and observation during historic field surveys (prior to 2003). Other mammal species observed and known to occur in the vicinity of the site include bobcat (*Felis rufus*), coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), western gray squirrel (*Sciurus griseus*) and Merriam's chipmunk (*Eutamias merriami*).

A few bat species including myotis (*Myotis* sp.) and big brown bat (*Eptesicus fuscus*) could potentially forage and temporarily roost on site. However, as the site does not support ideal roosting habitat (the joints in the bridge are not large enough) bat species known to occur in the project vicinity would not be expected to utilize on-site resources on more than an infrequent basis. Based on the proximity to water, the bridge structure may be occasionally used as a night feeding roost by bat species.

#### Wildlife Movement/Corridors:

Wildlife movement corridors are linkages of natural habitat between larger areas that are not contiguous or otherwise connected. Wildlife movement is essential to wildlife survival, whether it be the day-to-day movements of individuals seeking shelter, food, or mates, or the migration of organisms to avoid seasonally unfavorable conditions. Movements can lead to recolonization of unoccupied habitats after environmental disturbances and promote the healthy mixing of genes among separated populations.

The proposed project site is located within a large contiguous open space area of the Angeles National Forest in the San Gabriel Mountains. As such, there are no regional corridors linking two or more non-contiguous area of natural habitat within the region of the project site.

Because of the vast contiguous open space that occurs in all directions around the project site and numerous other travel routes in the vicinity, the San Gabriel River under SR-39 itself should not be considered a barrier to a wildlife movement corridor linking two otherwise disconnected open spaces. Rather, it is but one of many possible localized travel routes available to large and medium sized mammals.

### **2.18.3 Environmental Consequences**

Initial construction activities could temporarily disturb common wildlife species on and immediately adjacent to the project site. Many of the species that have the ability to relocate would be presumed to do so within the vicinity. Construction impacts would be temporary and the majority of the permanent improvements would be underneath the existing bridge structure. Because of

the relatively low amount of habitat that would be impacted and the relatively common nature of these species, only minor impacts are expected to occur to common wildlife species.

#### **2.18.4 Avoidance, Minimization, and/or Mitigation Measures**

The Migratory Bird Treaty Act prohibits the take of any active bird nests of most avian species. However, the project design has included measures to reduce or eliminate the potential for take of any active nest. A qualified biologist will conduct a pre-construction nesting bird survey within three days of the initial ground clearance and monitor/protect any active nests found until fledglings are no longer dependent on the nest site.

### **2.19 THREATENED AND ENDANGERED SPECIES**

#### **2.19.1 Regulatory Setting**

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game (CDFG) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

#### **2.19.2 Affected Environment**

##### **Special Status Wildlife Species**

The following is a discussion of special-status wildlife species observed or potentially occurring on the project site. Results and conclusions are based on habitat types present on the site, a review of the CNDDDB (2008) and other pertinent literature, known geographic ranges of these species and data collected during general and focused field surveys.

The term special-status wildlife includes those species that are state or federally listed as threatened or endangered, have been proposed or are candidates for listing as threatened or endangered, are considered State Species of Special Concern, CDFG Special Animals, California Protected or Fully Protected Species, or are Federal Species of Concern.

In preliminary conversations with resource agencies, Caltrans has been asked to evaluate potential impacts to three special-status wildlife species, Least Bell's vireo (*Vireo bellii*), Southwestern Willow Flycatcher (*Empidonax traillii*), and Mountain Yellow-Legged Frog (*Rana muscosa*). These species have the potential to be present within the riparian portions of the project area. A more detailed discussion of these species is presented below.

Least Bell's Vireo (*Vireo bellii pusillus*): Federal status – Endangered; State status – Endangered; Forest Service Status – None.

Least Bell's vireo is a migrant that summers in southern California. They inhabit low riparian growth in the vicinity of water or in dry river bottoms below 2,000 feet elevation. Although the project site is located higher in elevation and no observations of Least Bell's vireo have been noted in the CNDDDB within the region, focused protocol surveys were conducted for this species in conjunction with Southwestern willow flycatcher since they typically occur in similar habitat. The historical focused protocol survey was conducted in 2001. Although no suitable habitat was identified on the proposed project site, potential habitat was noted in the Bear Creek drainage west of the project location. Least Bell's vireo has not been observed by Caltrans biologists or ECORP, nor are they expected to be present at the project site.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*): Federal status – Endangered; State status – Endangered; Forest Service Status – None.

Southwestern willow flycatcher most often occurs in broad, open river valleys or large mountain meadows with lush growth and shrubby willows. Several observations of this species occurring downstream from the project site were noted in the CNDDDB. Focused protocol surveys were conducted in 2001 to determine presence/absence for this species on the project site or within the immediate vicinity. No suitable habitat occurs on the project site and therefore no Southwestern willow flycatcher is expected to occur on the project site or within the immediate vicinity.

Mountain Yellow-Legged Frog (*Rana muscos*): Federal status – Endangered; State status – Species of Special Concern; Forest Service Status – None.

Isolated locations of mountain yellow-legged frog are found in southern California in the San Gabriel Mountains, San Bernardino Mountains, San Jacinto Mountains and Mount Palomar. These frogs are diurnal and emerge from their burrows just after snow melt in the spring and are found within a few feet of a suitable water source. They inhabit rocky open streams and lake edges, prefer water depth of two to three inches, and can be found at elevations between 984 to over 12,000 feet. No mountain yellow-legged frogs were observed by Caltrans biologists or the biological consultant ECORP, nor are they expected to be present at the project site.

## **Summary**

The NES prepared for the proposed project provides details on the potential impacts to federally listed plant and wildlife species. A Section 7 consultation would be necessary to attain authorization for potential adverse effects to federally listed species, or their designated critical habitat. Based on the marginal level of potential impacts, avoidance and minimization measures, and compensatory mitigation, the USFWS is expected to issue a No Jeopardy Biological Opinion for the proposed project.

Initial consultation began when a species list request was requested on October 24, 2008 from USFWS. No further consultation was initiated because effects to Federal-listed species are not anticipated.

Listed and sensitive plant and animal species may have the potential to occur in the same general area as the project according to State (CDFG) and federal (USFS and USFWS) species list databases and habitat model maps. The following Threatened and Endangered species were evaluated for the potential to occur in the project area according to the NES prepared for the proposed project.

**Table 2.19-2: Special-Status Wildlife Species Known to Occur Within the Vicinity of the Project Site**

Species Name	Status <sup>14</sup>	General Description	Habitat	Habitat Present/Absent <sup>15</sup>	Historical or Current Occurrence	Will Project Impact Affect	Comment
Nelson's Big Horned Sheep <i>Ovis canadensis nelsoni</i>	FSS CSC	Open rocky steep areas with available water and herbaceous forage.		P	No	No	The distribution of bighorn sheep in the San Gabriel Mountains is described by eight winter-spring ranges that are aggregated into four groups of sheep, based on summer ranges (Holl et. al, 2002). The four groups of sheep include: Cucamonga Peak, San Antonio Peak, Iron Mountain and Twin Peaks.  General habitat for this species is present within the project area; however, a species survey conducted by ECORP in 2008 concluded presence would be unlikely during construction.
Pallid Bat <i>Antrozous pallidus</i>	CSCFSS	Roost in rock crevices, tree hollows, mines, caves, and a variety of man-made structures. Local data suggest that this species may be most common at elevations below 6,000 feet on both coastal and desert sides.		P	Yes	Possible Indirect	General habitat for this species is present adjacent to the project area; Suitable habitat occurs outside of the direct project impact footprint. Exit surveys will be performed prior to construction to determine presence.
Townsend's Big-Eared Bat <i>Corynorhinus townsendii townsendii</i>	FSCCSC FSS	The distribution of this species is strongly correlated with the availability of caves and cave-like roosting habitat, cavity forming rock and/or historic mining areas. Abandoned mines are particularly important. Typically found in all but subalpine and alpine habitats.		A	No	No	General habitat for this species is not present within the project area as there are no caves or cave like cavities in nearby rocks.
Western Red Bat <i>Lasiurus blossevillii</i>	FSS	Forests and woodlands from sea level through mixed conifer forests. Roosts in the foliage of trees and shrubs, often in riparian habitat.		A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; The stream at this location was once thick with alder/willow canopy but the area was burned and is now lacking a tree canopy.
White-Eared Pocket Mouse <i>Perognathus alticola alticola</i>	FSCCSCF SS	Open pine forests that contain bracken fern, may occur in sagebrush, pinion-juniper woodlands, and open pine forests on N. side		A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.

		of SB mtns, possibly San Gabriel mtns. Known localities from 5,400 to 5,800 feet.				
Tehachapi Pocket Mouse <i>Perognathus alticola inexpectatus</i>	FSCCSCF SS	Pinyon-juniper, Joshua tree, and mixed montane, chaparral habitats. Prefers gravelly/sandy slopes with sparse shrub cover for burrowing purposes, and is normally found at elevations of 4,000 to 5,000 feet. The	A	No	No	This species is not expected to occur within the project impact area as it is out of the species range. The Tehachapi pocket mouse is endemic to the Tehachapi Mountains and the western Transverse Ranges (Allan et. al., 1994).
Los Angeles Pocket Mouse <i>Perognathus longimembris brevinaus</i>	FSC CSC FSS	Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush habitats. Sandy soils for burrows, but can also be found near gravel washes at elevations below 2,200 feet.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Northern Goshawk <i>Accipter gentilis</i>	FSCCSC FSS	Occurs in dense, mature conifer and deciduous forest, interspersed with meadows, other openings, and riparian areas required. Nesting habitat includes north-facing slopes near water. Prefers middle and higher elevations, and mature, dense conifer forests. Hunts in wooded areas. Uses mature and old-growth stands of conifer and deciduous habitats.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during the survey.
Swainson's Hawk <i>Buteo swainsoni</i>	ST FSS	Open desert grasslands, or croplands containing large trees or small groves, however it has been found near water in the Central Valley.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during the survey.
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>	FE	Broad, open river valleys or large mountain meadows with lush growth and shrubby willows (Myers, S.J., 1998).	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during the protocol surveys conducted in 2001 and 2005 by Dr. Baskin et. al.
Peregrine Falcon <i>Falco peregrinus</i>	SE FSS	Protected cliffs and ledges for cover in riparian, coastal and inland wetland habitats.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during the survey.
California Condor <i>Gymnogyps californianus</i>	FE SE	Semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley, including coastal ranges from Santa Clara County to Los Angeles County. Condors generally nest in cliffs, although they have been observed using cavities in large redwood trees.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during onsite surveys.
Bald Eagle <i>Haliaeetus leucocephalus</i>	FT SE	Large bodies of water or free-flowing rivers with abundant fish with adjacent snags or	A	No	No	Breeding populations currently exist on the Los Padres and San Bernardino National Forest. Bald eagles have not nested within or adjacent to the

		perches.				Angeles National Forest in Los Angeles County for at least 25 years. Bald eagles are occasionally seen on or near the Santa Clara/Mojave Rivers Ranger District during the winter, but apparently none are resident. This species is not expected to occur within the project impact area; evidence of this species was not observed during the survey.
California Gnatcatcher <i>Poliptila californica californica</i>	FT CSC	This bird typically occurs near sage scrub at elevations of less than 2,500 feet. In the Angeles NF, have only been documented in E. SG Foothills (Etiwanda Fan).	P	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during the surveys conducted by Dr. Baskin et. al., in 2001 and 2005.
California Spotted Owl <i>Strix occidentalis occidentalis</i>	FSC CSCFSS	Found in mature forests, typically with a dense, multi-layered canopy. Nest stands often have a well-developed hardwood understory (e.g., canyon live oak) and a conifer overstory. However, some high-elevation territories (above 6,500 feet) consist primarily or solely of conifers and some low-elevation territories (below 3,000 feet) and are found in pure hardwood stands.	P	No	No	While there are individual oak trees within the staging area, there is not a large enough assemblage for this species to utilize. The Spotted Owl is known to occur in Bear Canyon, which is a smaller isolated canyon 5 miles northwest. The owl was not observed during any of the surveys conducted.
Least Bells Vireo <i>Vireo bellii pusillus</i>	FE, SE	Summer resident of Southern California and inhabits low riparian growth in vicinity of water or in dry river bottoms below 2,000 feet. The nests are placed along margins of bushes or on twigs projecting into pathways, usually willow, cottonwood, and baccharis, (U.S. FWS 1986a).	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat. Chaparral/sage scrub plant communities dominate the staging area, while burned out alder trees with a few isolated mulefat shrubs and willows dominate the streambed impact area; evidence of this species was not observed during the protocol surveys conducted in 2001 and 2005 by Dr. Baskin et. al.
Santa Ana Sucker <i>Catostomus santaanae</i>	FT CSCFSS	Sand-rubble-boulder bottoms with cool, clear water and algae.	P	Yes	Yes	This portion of the SG River is designated Critical Habitat for the sucker; it can be expected that there will be occasional movement of this species through the project area.
Arroyo Chub <i>Gila oreutti</i>	FSC CSCFSS	Slow water streams with mud or sand bottoms.	A	Yes	No	Active streamflow is present in the SG River in the project impact area; it can be expected that there will be occasional movement of this species through the project area.
Unarmored Threespined Stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE SE	Fresh and salt water usually near shore (U.S. Fish and Wildlife Service, 1985a).	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat and elevation constraints.
Santa Ana Speckled Dace <i>Rhinichthys osculus</i>	FSCCSCFSS	Permanent flowing streams with summer temperatures of 17-20 Celsius.	P	Yes	Yes	Active streamflow is present in the SG River in the project impact area; it can be expected that there will be occasional movement of this species through the project area.
San Gabriel Slender Salamander	FSS	Under rocks, wood, under fern fronds, and on soil or talus slopes. Known elevation range	P	Yes	No	General habitat for this species is present within the project area; However, no documentation of this species in area to date.

<i>Batrachoseps gabrieli</i>		is 3,800-7,800 feet.				
Arroyo Toad <i>Bufo (microscaphus) californicus</i>	FE CSC	Semi-arid regions near washes on intermittent streams, including valley-foothill, desert riparian, desert wash and rivers with sandy banks, willows, cottonwoods, and sycamores. Prefer low gradient streams (U.S. Fish and Wildlife Service, 1994a)	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat, lack of burrowing sites, as well as the high gradient and swift moving water of the stream at this location; evidence of this species was not observed during the protocol surveys conducted in 2001 and 2005 by Dr. Baskin et. al.
Yellow-Blotched Ensatina <i>Ensatina eschscholtzii croceator</i>	FSCCSCF SS	Deciduous and evergreen forests, usually under rotting logs, bark and rock.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat and lack of any know populations in the ANF; evidence of this species was not observed during onsite surveys.
California Red-legged Frog <i>Rana aurora draytoni</i>	FT CSC	Marshes, slow parts of streams, lakes, reservoirs, ponds, and other permanent waters. Needs dense patches of willows, cattails, rush.	A	Yes	No	Suitable habitat for this species is not present within the project area; evidence of this species was not observed during the protocol surveys conducted in 2001 and 2005 by Dr. Baskin et. al.
Foothill Yellow-Legged Frog <i>Rana boylei</i>	FSCCSCF SS	Streamside habitat near riffles where there are rocks and sunny banks. Below 4000 feet.	P	No	No	General habitat for this species is present within the project area; however <i>Rana boylei</i> have not been observed south of the southern Los Padres ranges since 1978. Evidence of this species was not observed during onsite surveys. Presumed extirpated from site.
Mountain Yellow-Legged Frog <i>Rana mucosa</i>	FE CSCFSS	Highly aquatic, this species is found in streams, rivers and on their banks; often suns on rocks. Above 4,500 feet.	A	Yes	No	General habitat for this species is present within the project area. Evidence of this species was not observed during onsite surveys in 2001, 2005, or 2008. The potential for this species to occur within the project site is not expected due to the elevation being too low for this species.
California Legless Lizard <i>Anniella pulchra</i>	FSS	Common in drier, loose sandy soils, from inland foothills to coastal dunes. Burrows in loose soil, especially in semi-stabilized sand dunes and also in other areas with sandy soil, in areas vegetated with oak or pine-oak woodland, or chaparral; also wooded stream edges, and occasionally desert-scrub. Often found in leaf litter, under rocks, logs, and driftwood.	P	N	Possibly	General habitat for this species is present within the project area; This species was not observed in species surveys conducted in 2001, 2005, and 2008.
Southwestern Pond Turtle <i>Clemmys marmorata pallida</i>	FSCCSCF SS	Year-round water surface flows, such as deep pools and relatively undisturbed banks and streamside vegetation with basking sites	P	No	No	General habitat for this species is present within the project area; evidence of this species was not observed during the surveys conducted in 2001 and 2005. Pre-construction surveys will be done to minimize harm to this species.
Southern Rubber Boa <i>Charina bottae umbratica</i>	FSS	Prefer moist woodlands and coniferous forests between 4,995-7,900 feet. Associated with vegetative sites, usually with deep, well-developed soils. Large downed logs and a well-	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.

		developed litter/duff layer are important for cover and for maintaining high soil moisture. Soil moisture may be a limiting factor, as they are usually found during summer months in damp draws near springs, seeps, and streams.				
San Bernardino Ringneck Snake <i>Diadophis punctatus modestus</i>	FSCFSS	This snake prefers moist habitats and can be found in woodlands, forests, grasslands, chaparral, and home gardens from sea level to 6,400 feet, though generally found below 3000 feet. Usually found under surface objects such as rocks, logs, rotting logs, the bark of standing or prone dead trees.	P	No	Possibly	General habitat for this species is present within the project area; however, the species was not observed in a 2008 species survey by ECORP.
Desert Tortoise <i>Gopherus agassizi</i>	FT ST	Firm, but not hard, ground for construction of burrows (banks of washes or compacted sand), adequate ground moisture for survival of eggs and young, and grass, cactus or other low growth for food (U.S. FWS, 1986b).	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat.
San Bernardino Mountain Kingsnake <i>Lampropeltis zonata parvirubra</i>	FSCCSCF SS	Moist woods, coniferous forests, oak woodland and chaparral, in mountain areas as well as canyons down to sea level. 1,200-8,100 feet.	P	No	Possibly	General habitat for this species is present within the project area; however, the species was not observed in a 2008 species survey by ECORP.
Coastal Rosy Boa <i>Lichanura trivargata roseofusca</i>	FSC FSS	Boulder-strewn, rocky shrublands and deserts. It prefers foothills with numerous rock outcrops or talus slopes. Up to 8,000 feet.	P	No	Possibly	General habitat for this species is present within the project area. The species was not observed during a species survey conducted by ECORP in December 2008.
San Diego Horned Lizard <i>Phrynosoma coronatum blainvillei</i>	FSC	Coastal sage scrub and chaparral in arid and semi-arid climate conditions up to 7000 feet. Prefers friable, rocky, or shallow sandy soils.	P	No	Possibly	General habitat for this species is present within the project area; The species has been observed at Pine Flats which is two miles from the project site. The potential for this project to impact habitat or individuals of this species is not expected; the most suitable habitat is the project staging area, which has already been impacted by previous construction.
Two-Striped Garter Snake <i>Thamnophis hammonii</i>	FSCCSC	Streamside habitats that form pools with amphibian larvae concentration.	P	No	Possibly	General habitat for this species is present within the project area; however, no species were observed in a 2008 species survey.

<sup>1</sup> Status: Federal Endangered (FE), Federal Threatened (FT), Federal Species of Concern (FSC), Forest Service Sensitive (FSS), State Endangered (SE), State Threatened (ST), State Species of Concern (CSC), California Native Plant Society ( \* ), State Rare (SR).

<sup>1</sup> Absent (A) means no further work needed. Present (P) means general habitat is present and species may be present.

### Special Status Plant Species

The following table provides a list of special-status plant species within the vicinity or potentially occurring on the project site. Results and conclusions are based on habitat types present on the site, a review of the CNDDDB (2008) and CNPS (2008) databases and other pertinent literature,

known geographic ranges of these species, and data collected during general and focused field surveys.

Based on the results of historical field surveys, current field surveys, and a search of the CNDDDB, no special-status plant communities or habitats of concern were identified within the project site.

**Table 2.19-3: Special-Status Plant Species Known to Occur Within the Vicinity of the Project Site**

Species Name	Status <sup>16</sup>	General Habitat Description	Habitat Present/ Absent <sup>17</sup>	Historical or Current Occurrence	Will Project Impact / Affect	Comment
Forest Camp Sandwort <i>Arenaria macradenia</i> var. <i>kuschei</i>	FSS	Forest camp sandwort occurs in sunny, rocky openings in a mosaic of chaparral and oak woodland vegetation on granitic substrate. Munz (1974) describes its habitat as dry slopes below 6000 feet elevation in Creosote Bush Scrub, Joshua Tree Woodland, and Pinyon-Juniper Woodland.	A	No	No	<i>Arenaria macradenia</i> var. <i>kuschei</i> was discovered along Liebre Mountain during a plant survey by Rancho Santa Ana Botanic Garden in 1998 (Bramlet et al 1998). Other than these new sightings, the only historic location is from a single collection made in 1929 at "Forest Camp, San Bernardino County, 4000 feet" (Hickman 1993; Skinner & Pavlik 1994). There are no documented occurrences of the forest camp sandwort within the project area.
Crested Vetch <i>Astragalus bicristatus</i>	FSS	Rocky or sandy places in montane coniferous forest at elevations between 5,800-9,000 feet and flowers between May and August.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation as well as lack of coniferous forest species.
Braunton's Vetch <i>Astragalus brauntonii</i>	FE	Closed-cone coniferous forests, chaparral, coastal scrub, valley and foothill grassland. Found on small limestone outcrops in gaps or disturbed places within these habitat types. Elevation 10-2500 feet.	P	No	No	General habitat for this species is present within the project area; the potential for this species to occur within the project impact area will be further evaluated
San Antonio Milk Vetch <i>Astragalus lentiginosus</i> var. <i>antonious</i>	FSS	Open slopes in the yellow pine forest at elevations of 5,000-8,000 feet. It is primarily located in the eastern San Gabriel Mountains and flowers between April and July.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation. Known locations are all prior to 1947 and are cited as being in Swarthout Valley, Blue Ridge, Prairie Fork San Gabriel River, and Pinyon Ridge (CNDDDB 2002). It is known to occur in Los Angeles and San Bernardino counties on the following quadrangles: Mt. San Antonio, Telegraph Peak, and Valyermo. There are no documented occurrences of the San Antonio milk-vetch within the project area.
Nevin's Barberry <i>Berberis nevinii</i>	FE	Sandy and gravelly places to 2000', coastal sage scrub, chaparral (CNPS 2005)	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Scalloped Moonwort <i>Botrychium crenulatum</i>	FSC	Bogs and fens, lower montane coniferous forest, meadows, and freshwater marshes.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat; evidence of this species was not observed during botanical surveys conducted (2001, February 28, 2005, April 6, 2005, August 3, 2005, and March 24, 2006).

<sup>16</sup> Status: Federal Endangered (FE), Federal Threatened (FT), Federal Species of Concern (FSC), Forest Service Sensitive (FSS), State Endangered (SE), State Threatened (ST), State Species of Concern (CSC), California Native Plant Society ( \* ), State Rare (SR).

<sup>17</sup> Absent (A) means no further work needed. Present (P) means general habitat is present and species may be present.

Species Name	Status <sup>16</sup>	General Habitat Description	Habitat Present/Absent <sup>17</sup>	Historical Current or Occurrence	Will Project Impact / Affect	Comment
<b>Thread-Leaved Brodiaea</b> <i>Brodiaea filifolia</i>	FT SE	Cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools. Locally in heavy clay soils to 1000'	A	No	No	In Los Angeles county a small occurrence was discovered at Wild wood and Morgon canyons in 1991. There is no documented occurrence of thread-leaved brodiaea within the project limits (Caltrans surveys 2001, February 28, 2005, April 6, 2005, August 3, 2005, and March 24, 2006).
Alkali Mariposa Lily <i>Calochortus striatus</i>	FSCFSS	Alkaline meadows and springs in the Western Mojave Desert and Western Nevada, in habitats of creosote bush scrub at elevations of 2,500-4,500 feet. Flowers between April and June.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat.
<b>Plummer's Mariposa Lily</b> <i>Calochortus plummerae</i>	FSCFSS 1B*	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest at elevations of 3,500 to 6,500 feet. Flowers from May to July.	P	Nearby	No	General habitat for this species is present within the project area; the potential for this species to occur within the project impact area will be further evaluated.
<b>Palmer's Mariposa Lily</b> <i>Calochortus palmeri</i> var. <i>palmeri</i>	FSC FSS	Meadows, seeps, chaparral, and lower montane coniferous forest and flowers from May to July. May also occur in moist places in the early spring at elevations of 3,500 to 6,500 feet.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Pigmy Poppy <i>Cambia candida</i>	FSS	Sandy flats, in habitats of creosote bush scrub and Joshua tree woodland. Can be found at elevations of 2,000-4,000 feet and flowers between April and May.	A	No	No	This species is not expected to occur within the project impact area due to inappropriate habitat.
Mt. Gleason Paint-Brush <i>Castilleja gleasonii</i>	FSC FSS SR	Rocky places at elevations from 5,000 to 7,100 feet and flowers from April and May. May also occur in lower montane coniferous forest on open flats or slopes that contain granitic soils.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
San Fernando Valley Spineflower <i>Chorizanthe parryi</i> <i>Fernandina</i>	FC	Species elevation from 500-1200 feet. Found in grasslands in South Coast, eastern Western Transverse Ranges, San Gabriel Mountains. Extirpated from Los Angeles Basin; most likely to be found near Elizabeth Lake.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Pierson's Spring Beauty <i>Claytonia lanceolata</i> var. <i>peirsonii</i>	FSS	Lodgepole Pine Forest, gravelly woodlands, and meadows from 7000-9000 feet elevation. Other habitat parameters include north aspect, slopes of 40-60% grades, requires canopy cover for shade, and is intolerant of shrub cover or deep tree litter	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation and lack of suitable habitat.
Slender-Horned Spineflower <i>Dodecahema leptoceras</i>	FE SE	Sandy and coastal sage scrub habitats, adjacent to foothills, and in transverse and peninsular ranges. 600-2300 feet (U.S. Fish and Wildlife Service, 1987).	P	No	No	General habitat for this species is present within the project area, though in upper limits of know elevation; the potential for this species to occur within the project impact area will be further evaluated.
Many Stemmed Dudleya <i>Dudleya</i>	FSC FSS 1B*	Chaparral, coastal scrub, and valley and foothill grasslands. Dry stony places on heavy clay soils below	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation and lack of suitable habitat.

Species Name	Status <sup>16</sup>	General Habitat Description	Habitat Present/Absent <sup>17</sup>	Historical or Current Occurrence	Will Project Impact / Affect	Comment
<i>multicaulis</i>		2000 feet.				
San Gabriel River Dudleya ( <i>Dudleya cymosa</i> spp. <i>crebrifolia</i> )	FSS	Granitic substrate	A	No	No	This species is not expected to occur in the project area, with distribution limited to one site.
San Gabriel Mountains Dudleya <i>Dudleya densiflora</i>	FSC FSS IB*	Chaparral and coastal scrub in crevices and on decomposed granite on cliffs and canyon hills. steep, north-facing or easterly slopes, on between 650-2000 feet elevation	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
<b>Southern Alpine Buckwheat</b> <i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	FSS IB*	Alpine boulder and rock fields, and subalpine coniferous forest at elevations between 8,500 to 11,000 feet.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Johnson's Buckwheat <i>Eriogonum microthecum</i> var. <i>johnstonii</i>	FSS	Dry, rocky places in habitats such as montane coniferous forest at elevations of 8,500 to 9,500 feet. Flowers from July to September.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Pine Green Gentain <i>Frasera neglecta</i>	FSS	Dry open woodlands at elevations of 5,000 to 9,000 feet.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
San Gabriel Bedstraw <i>Galium grande</i>	FSC FSS	Cismontane woodland, chaparral, broadleaf upland forest and lower montane coniferous forest in open chaparral and low, open oak forest or on rocky slopes. Occurs at elevations of 1,400 to 5,000 feet and flowers from January and July.	P	No	No	General habitat for this species is present within the project area; the potential for this species to occur within the project impact area will be further evaluated.
<b>Lemon Lily</b> <i>Lilium parryi</i>	FSC FSS IB*	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Can be found in meadows and on wet banks in elevations of 4,000 to 9,000 feet and flowers between July to August.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation and lack of suitable habitat.
San Gabriel Linanthus <i>Linanthus concinnus</i>	FSC FSS IB*	Lower and upper montane coniferous forest. It can be found on dry, rocky slopes, often in the Jeffrey Pine/Canyon Oak Forest between 5000 to 9300 feet.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
Hall's Monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	FSS	Dry slopes and ridges, in habitats of chaparral and yellow pine forest at elevations of 2,500 to 6,000 feet. Flowers from June to August.	P	No	No	General habitat for this species is present within the project area; the potential for this species to occur within the project impact area will be further evaluated.
Rock Monardella <i>Monardella viridis</i>	FSS	Chaparral and yellow pine forest. Dry, rocky places	P	Unknown	No	General habitat for this species is present within the project area; the potential for this

Species Name	Status <sup>16</sup>	General Habitat Description	Habitat Present/Absent <sup>17</sup>	Historical or Current Occurrence	Will Project Impact / Affect	Comment
<i>var. saxicola</i>		from 1,700-6000 feet. Flowers June-Sept.				species to occur within the project impact area will be further evaluated.
<b>Baja Navarretia</b> <i>Navarretia peninsularis</i>	FSS	Riparian areas of open forest at elevations above 5,000 feet.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
<b>Short-Joint Beavertail</b> <i>Opuntia basilaris var. brachyclada</i>	SSCFSS	Dry slopes at elevations of 4,000 to 7,500 feet, in habitats of joshua tree woodlands and Pinyon Juniper Woodlands. Flowers from April to June. Potential habitat exists on all management areas except the San Gabriel River Ranger District (So. Calif. Mountains and Foothills Assessment, 1999).	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation, and lack of appropriate habitat.
<b>Rock Creek Broomrape</b> <i>Orobanche valida ssp. valida</i>	SSCFSS	Gravelly granitic soil, in chaparral, at elevations of 4,000 to 7,000 feet and flowers from May to July. Associated with Eriodictyon, Garrya, etc.	A	No	No	This species is not expected to occur within the project impact area due to limits on elevation.
<b>Parish's Checkerbloom</b> <i>Sidalcea hickmanii parishii</i>	FC	Chaparral and Yellow Pine Forest from 3,000-8,500 feet. No documented occurrences in LA County	A	No	No	This species is not expected to occur within the project impact area.

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Species of Concern (FSC), Forest Service Sensitive (FSS), State Endangered (SE), State Threatened (ST), State Species of Concern (CSC), California Native Plant Society ( \* ), State Rare (SR).

Absent (A) means no further work needed. Present (P) means general habitat is present and species may be present.

### 2.19.3 Environmental Consequences

#### SPECIAL STATUS PLANTS

No direct impacts to special-status plants species are expected to occur with the implementation of the proposed project because none were observed within the limits of construction or impact zone.

#### SPECIAL STATUS WILDLIFE

##### Mammals

##### ➤ Pallid Bat (*Antrozous pallidus*)

Temporary disturbance from construction activities associated with the project may lead to site abandonment by bats roosting in suitable rock outcrops adjacent to the bridge and roadway. The pallid bat also utilizes tree cavities and rock outcrops as habitat. Several trees may be removed from the riverbed to allow equipment access.

##### Reptiles

The following discussion will address direct, indirect, and cumulative impacts on the following reptiles:

➤ San Diego Coast Horned Lizard (*Phrynosoma coronatum blainvillii*)

This proposed project is not expected to impact individuals or habitat of the San Diego Coast Horned Lizard (*Phrynosoma coronatum blainvillii*). The most suitable habitat for this species in the project impact area occurs in the staging area, which has already been modified by previous construction activities.

➤ California Legless Lizard (*Anniella pulchra*)

Individuals and appropriate habitat for the California Legless Lizard (*Anniella pulchra*) has the potential to be impacted by this project. This assessment is based on suitable habitat for this species being present in the sandy/rocky stream bottom and levee of the project impact area. This species was not observed during surveys conducted onsite in 2001 and 2005, nor was this species observed during a species survey conducted by ECORP in December 2008.

➤ Coastal Rosy Boa (*Lichanura trivirgata roseofusca*)

Individuals and appropriate habitat for the Coastal Rosy Boa (*Lichanura trivirgata roseofusca*) may be impacted by this project. This assessment is based on suitable habitat for this species being present in the sandy/rocky stream bottom and levee of the project impact area and the determination by Dr. Baskin (2005) that the Coastal Rosy Boa must be considered as potentially present. The Coastal Rosy Boa was not observed during the survey conducted by the biological consultant ECORP in December of 2008. However, presence of this species will be assumed per Dr. Baskin's recommendations (2005).

➤ San Bernardino Ringneck Snake (*Diadophis punctatus modestus*) and San Bernardino Mountain Kingsnake (*Lampropeltis zonata parvirubra*)

Individuals and appropriate habitat for the San Bernardino Ringneck Snake (*Diadophis punctatus modestus*) and San Bernardino Mountain Kingsnake (*Lampropeltis zonata parvirubra*) may be impacted by this project. This assessment is based on suitable habitat for this species being present in the sandy/rocky stream bottom and levee of the project impact area. Suitable habitat was determined in a microhabitat survey and analysis conducted by ECORP in December 2008. According to the survey, suitable habitat exists within the proposed project limits, however the species were not observed.

➤ Two-striped Garter Snake (*Thamnophis hammondi*)

Individuals and appropriate habitat for the Two-striped Garter Snake (*Thamnophis hammondi*) may be impacted by this project. This assessment is based on suitable habitat for this species being present in the perennial stream bottom and proposed staging area. According to the December 2008 ECORP survey, suitable habitat exists within the project limits, however, the species was not observed.

With all reptile species, the potential for direct mortality as a result of crushing by equipment and people within stream and riparian corridors or road corridors is possible. Other potential direct effects include movement of sediment into occupied habitat, which may lead to covering eggs and/or larvae from ground disturbing activities within the project limits.

## Fish

The following discussion will address direct, indirect and cumulative impacts on the Santa Ana Sucker and the Santa Ana Speckled Dance species.

There is a potential for impacts to fish species due to the stream diversion potentially resulting in a change in flow rate, degradation of water quality, burial of eggs from sedimentation, and devastation from foot or equipment traffic.

The project would result in temporary habitat modification within the North Fork San Gabriel River under the bridge. This segment of the river is designated as Critical Habitat for the Santa

Ana Sucker. Both the Santa Ana Sucker and the Speckled Dance were present during a 2005 survey, however, in the most recent survey done by ECORP in December 2008, neither species was observed.

There is potential for the stream diversion to affect fish passage and alter the spawning area and water chemistry. The stream within the project area is not believed to be suitable habitat for the Arroyo Chub, and therefore no impact to Arroyo Chub is anticipated.

Indirect impacts could include a short and/or long-term reduction in water quality resulting in reduced habitat capability for sensitive fish species, alteration of habitat (changing riffles and runs, pool depth, etc.) within the project footprint, and construction activities resulting in atypical lighting, noise and vibration for the area.

A survey was conducted by ECORP in December of 2008 to determine habitat suitability for these three species within the project limits. The survey concluded that based on the abundance of instream habitat complexity, presence of suitable substrates, sustainable quality of the water, and historical record of observations within several miles of the proposed project site, it is anticipated that there will be occasional movement of these species through the project area.

#### **2.19.4 *Avoidance, Minimization, and/or Mitigation Measures***

Caltrans would contract with a recognized expert in the field of inland fisheries to help design parameters for a diversion that would not impact fish passage or habitat. General parameters for a diversion at this location would include a natural bottom diversion as well as a restriction on increasing or decreasing the average daily flow rate.

## **2.20 INVASIVE SPECIES**

### **2.20.1 *Regulatory Setting***

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

### **2.20.2 *Affected Environment***

The proposed project occurs within the Angeles National Forest. The project would involve construction activities and staging within a highly disturbed staging area, and a previously graded access road. There are some areas of native vegetation that would be disturbed within the project area, and would require re-vegetation. Please refer to the Natural Communities portion of the document for a more detailed discussion of the issue of ruderal/invasive plants.

### **2.20.3 *Environmental Consequences***

Please refer to the Ruderal/Invasive Plant Communities subsection of the Natural Communities discussion in Section 2.15.

#### **2.20.4 Avoidance, Minimization, and/or Mitigation Measures**

Caltrans Biology and Landscape Architecture divisions would coordinate to develop a plant palette appropriate to the area that does not contain exotic invasive species.

The contractor would be required to wash equipment and vehicles before and after entering the project site, and keep a written log of vehicle washings in order to comply with The US Forest Service Manual 2081.03 and prevent the introduction of invasive species.

If soil or mulch were brought onsite from outside the immediate area, it would be inspected by the US Forest Service botanist for invasive plant and weed seeds. If soil or mulch is purchased from a vendor, it would be certified "weed-free."

### **2.21 CLIMATE CHANGE**

#### **2.21.1 Regulatory Setting**

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas<sup>18</sup> (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations will apply to automobiles and light trucks beginning with the 2009 model year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. However, California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHGs as a pollutant under the Clean Air Act (Massachusetts vs. Environmental Protection Agency et al., U.S. Supreme Court No. 05-1120. 549 U.S. \_\_\_\_\_. Argued November 29, 2006—Decided April 2, 2007). The court ruled that GHGs do fit within the Clean Air Act's definition of a pollutant, and that EPA does have the authority to regulate GHGs. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

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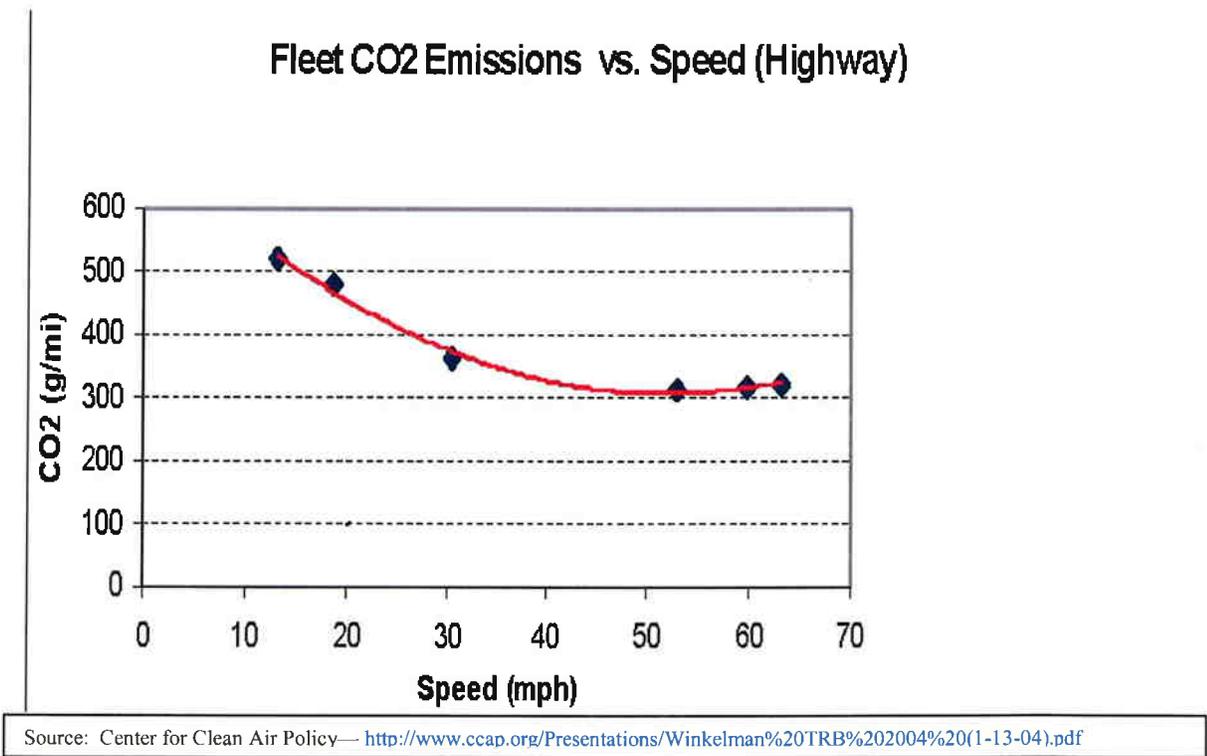
<sup>18</sup> Greenhouse gases related to human activity, as identified in AB 32, include: Carbon dioxide, Methane, Nitrous oxide, Tetrafluoromethane, Hexafluoroethane, Sulfur hexafluoride, HFC-23, HFC-134a\*, and HFC-152a\*.

According to a recent white paper by the Association of Environmental Professionals<sup>19</sup>, an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans (December 2006). Transportation's contribution to GHG emissions is dependent on 3 factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel.

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure below). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in GHG emissions.

**Figure 9: CO<sub>2</sub> Emissions vs. Speed (Highway)**



<sup>19</sup> Hendrix, Micheal and Wilson, Cori. Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents (March 5, 2007), p. 2.

Caltrans recognizes the concern that carbon dioxide emissions raise for climate change. However, accurate modeling of GHG emissions levels, including carbon dioxide at the project level, at the project level is not currently possible. No federal, state or regional regulatory agency has provided methodology or criteria for GHG emission and climate change impact analysis. Therefore, Caltrans is unable to provide a scientific or regulatory based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the Climate Action Program at Caltrans (December 2006), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks. However, it is important to note that the control of the fuel economy standards is held by the United States Environmental Protection Agency and ARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California Davis.

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings and appropriate document mailings. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

### **3.1 CONSULTATION WITH AGENCIES/SCOPING**

The State of California Department of Transportation works in close cooperation with the United States Forest Service for any and all projects that occur on a state-owned highway within a National Forest. This ensures that all laws and regulations are followed and that projects are consistent with National Forest Land and Resource Management Plans. Since this is a state highway within the National Forest, Caltrans is the lead agency for CEQA and NEPA, and coordination is ongoing with USFS.

Caltrans has communicated with representatives from the Angeles National Forest regarding the project scope and issues related to sensitive plant and animal species.

A Notice of Scoping/Initiation of Studies letter was sent to Elected officials, Federal and State agencies, and regional and local governments on October 31, 2008. The scoping process was conducted for the project in an effort to solicit public concerns and ensure early consultation. The notice briefly described the proposed project, location, potential environmental effects and the type of Environmental Document.

Comments raised from the Notice of Preparation included the following:

- The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) commented on preservation and restoration of the open space within the Angeles National Forest as set forth by the Rivers and Mountain Conservancy Plan. RMC wishes to be involved with any necessary mitigation requirements/potential impacts of the project.
- The Native American Heritage Commission requested provisions be included in the environmental document in the event of discovery of Native American remains/artifacts. A list of Native American Contacts was also provided.

**Project Development Team / Specialists**

Aziz Elattar, Branch Chief  
Carlos Montez, Senior Environmental Planner  
Gary Iverson, Senior Environmental Planner (Cultural Resources)  
Paul Caron, Senior Environmental Planner (Biology)  
Elisabeth Suh, Associate Environmental Planner (Generalist)  
Mine Struhl, Associate Environmental Planner (Generalist)  
Kelly Ewing-Toledo, Associate Environmental Planner (Cultural Resources)  
Natalie Hill, Environmental Planner (Generalist)  
Eric Hanson, Environmental Planner (Biological Resources)

Andrew Yoon, Senior Transportation Engineer (Air Quality)  
Ayubur Rahman, Senior Transportation Engineer (Hazardous Waste)  
Upa Patel, Transportation Engineer (Hazardous Waste)  
Jin S. Lee, Branch Chief (Noise and Vibration Branch)  
Hamid Sarraf, Noise Specialist (Noise and Vibration Branch)

John K. Lee, Project Manager  
M. Oji Kalu, Design Manager  
Dan Tran, Design B  
Shirley Pak, Senior Transportation Engineer (Stormwater)  
Fardin Amini, Transportation Engineer (Stormwater)  
Gustavo Ortega, Senior Engineering Geologist (Geology)  
Patty Watanabe, Senior Landscape Architect (Visual Analysis)  
Kathleen Ledesma, Associate Landscape Architect (Visual Analysis)

**Elected Officials**

The Honorable Barbara Boxer  
United States Senate

The Honorable Dianne Feinstein  
United States Senate

The Honorable David Dreier  
United States House of Representatives,  
26<sup>th</sup> District

The Honorable Hilda L. Solis  
United States House of Representatives,  
32<sup>nd</sup> District

The Honorable Howard P. McKean  
United States House of  
Representatives, 25<sup>th</sup> District

The Honorable Adam Schiff  
United States House of Representatives,  
29<sup>th</sup> District

The Honorable Bob Margett  
California State Senate,  
29<sup>th</sup> District

The Honorable Gloria Romero  
California State Senate,  
24<sup>th</sup> District

The Honorable Ed Hernandez  
California State Assembly,  
57<sup>th</sup> District

The Honorable Sharon Runner  
California State Assembly,  
36<sup>th</sup> District

The Honorable Michael D. Antonovich  
Supervisor, Los Angeles County,  
5<sup>th</sup> District

The Honorable Gloria Molina  
Supervisor, Los Angeles County,  
1<sup>st</sup> District

The Honorable Anthony Portantino  
California State Assembly,  
44<sup>th</sup> District

The Honorable Joseph R. Rocha  
Mayor, City of Azusa

Honorable Members of City Council  
City of Azusa

**Federal Agencies**

District Commander  
U.S. Army Corps of Engineers, Los  
Angeles District

Mr. Ken Berg, Field Supervisor  
U.S. Fish and Wildlife Service  
Carlsbad Field Office

Karen Fortus, Resource Officer  
U.S. Department of Agriculture,  
Forest Service

L'Tanga Watson, District Ranger  
U.S. Department of Agriculture, Forest  
Service

Eugene Lowe  
US Forest Service – Supervisor's  
Office

Caltrans Headquarters  
Attn: Environmental Planning

**State Agencies**

Office of Planning and Research  
State Clearinghouse

Dr. Knox Mellon  
State Historic Preservation Officer  
Office of Historic Preservation  
Department of Parks and Recreation

Executive Officer  
California Wildlife Conservation Board

California Highway Patrol

Randy Rodriguez, Staff Environmental  
Scientist  
Department of Fish and Game  
South Coast Region (5)

Belinda Faustinos, Executive Officer  
Rivers and Mountains Conservancy

John P. Donnelly, Executive Director

James Goldstene  
California Air Resources Board

Tracy Egoscue, Executive Officer  
Los Angeles Regional Water Quality  
Control Board

Mike Chrisman  
Biodiversity Council

### Regional and Local Governments

Conal McNamara  
Assistant Community Development  
Director, City of Azusa

Tito A. Haes  
Public Works Director, City of Azusa

Israel Deltoro  
City Planner, City of Azusa

Mr. Barry R. Wallerstein, Executive  
Officer  
South Coast Air Quality Management  
District

Brian Wallace,  
Associate Regional Planner  
Intergovernmental Review  
Southern California Association of  
Governments

Mr. James Hartl  
Director of Regional Planning  
Los Angeles County

Mr. James A Noyes  
Director, Department of Public Works  
County of Los Angeles

Mazan Dudar, Office Manager  
County of Los Angeles  
Department of Public Works  
San Gabriel Valley Region

Los Angeles County Flood Control District

Leroy D. Baca, Sheriff  
Los Angeles County Sheriff's  
Department

David R. Leininger,  
Chief Forestry Division  
Prevention Services Bureau  
Los Angeles County Fire Department

P. Michael Freeman, Fire Chief  
Forester & Fire Warden  
Los Angeles County Fire Department

Superintendent Cynthia Cervantes  
McGuire  
Azusa Unified School District

Mary Lamme, Consultant  
Los Angeles County Sheriff's  
Department

Metropolitan Transportation Authority

Irene Villapania  
Azusa Chamber of Commerce

Marcus Mack  
San Gabriel Valley Council  
Smiser Scout Center

Clark Fleup  
Wrightwood Chamber of Commerce

San Bernardino County Fire Dept.  
North Desert Battalion

County Sheriff's Office

Southern California Water

Ben White  
San Gabriel Mountains Trailbuilders

## APPENDIX A- CEQA CHECKLIST

# CEQA CHECKLIST

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included in Section VI following the checklist. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS -- Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</b>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IV. BIOLOGICAL RESOURCES -- Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Less Than Significant			
Potentially Significant Impact	With Mitigation Incorporation	Less Than Significant Impact	No Impact	

V. CULTURAL RESOURCES -- Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

VI. GEOLOGY AND SOILS -- Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:   |                          |                          |                          |                                     |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Landslides?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

VII. HAZARDS AND HAZARDOUS MATERIALS –

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

VIII. HYDROLOGY AND WATER QUALITY -- Would the project:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

		Less Than Significant		
	Potentially Significant Impact	With Mitigation Incorporation	Less Than Significant Impact	No Impact

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

IX. LAND USE AND PLANNING - Would the project:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

X. MINERAL RESOURCES -- Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Potentially Significant Impact      Less Than Significant With Mitigation Incorporation      Less Than Significant Impact      No Impact

XI. NOISE –

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

XII. POPULATION AND HOUSING -- Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Less Than Significant		
Potentially Significant Impact	With Mitigation Incorporation	Less Than Significant Impact	No Impact

XIII. PUBLIC SERVICES

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire protection?
- Police protection?
- Schools?
- Parks?
- Other public facilities?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XIV. RECREATION --

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XV. TRANSPORTATION/TRAFFIC -- Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Result in inadequate parking capacity?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

	Less Than Significant			
Potentially Significant Impact	With Mitigation Incorporation	Less Than Significant Impact	No Impact	

XVI. UTILITIES AND SERVICE SYSTEMS –

Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

g) Comply with federal, state, and local statutes and regulations related to solid waste?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

XVII. MANDATORY FINDINGS OF SIGNIFICANCE –

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

**APPENDIX B- TITLE VI POLICY STATEMENT**

**DEPARTMENT OF TRANSPORTATION**

OFFICE OF THE DIRECTOR  
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January 14, 2005

**TITLE VI  
POLICY STATEMENT**

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON  
Director

**APPENDIX C- DRAFT ENVIRONMENTAL COMMITMENT RECORD**

Mitigation Type	Responsible Party	Implementation/Monitoring Phase	Mitigation Measure
<b>BIOLOGY</b>			
Environmentally Sensitive Areas (ESAs)	Biology/ Generalist/ PM/ Resident Engineer	PS&E	Prior to clearing or construction, highly visible barriers (such as orange construction fencing) would be installed around and directly adjacent to the project footprint to designate Environmentally Sensitive Areas (ESAs) to be preserved. No grading or fill activity of any type would be permitted and heavy equipment, including motor vehicles, would not be allowed to operate within the ESAs.
Environmentally Sensitive Areas (ESAs)	Resident Engineer	Construction	All construction equipment would be operated to avoid accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, would be allowed within these protected zones. Silt fence barriers would be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.
Biological Monitoring	Biology/ Generalist/ Resident Engineer	PS&E/ Construction	A biologist would monitor construction activities for the duration of the project to ensure that vegetation removal, Best Management Practices (BMPs), ESAs, and all avoidance and minimization measures are properly followed.
Animal Species Mitigation	Biology/ Generalist/PM/ Resident Engineer	PS&E	The Migratory Bird Treaty Act prohibits the take of any active bird nests of most avian species. The project design has included measures to reduce or eliminate the potential for take of any active nest. A qualified biologist will conduct a pre-construction nesting bird survey within three days of the initial ground clearance and monitor/protect any active nests found until fledglings are no longer dependent on the nest site.
Vegetation Removal (coordination w/ Landscape Architecture)	Landscape Architecture/ Resident Engineer/ Biology	PS&E	A landscape plan would be developed to revegetate any areas where plants were removed within the project area. The plant palette would include native plant species typical of the surrounding area.
Invasive Species	Resident Engineer/ Biology	Construction	Inspection and cleaning of construction equipment would be performed to minimize the importation of non-native plant material, and eradication strategies (i.e., weed abatement programs) would be employed should an invasion occur.  The contractor would be required to wash equipment and vehicles before and after entering the project site, and keep a written log of vehicle washings in order to comply with The US Forest Service Manual 2081.03 and prevent the introduction of invasive species.
Biological contamination	Resident Engineer	Construction	If soil or mulch were brought onsite from outside the immediate area, it would be inspected by the US Forest Service botanist for invasive plant and weed seeds. If soil or mulch is purchased from a vendor, it would be certified "weed-free."
Fish Passage	Biology/ Resident Engineer	PS&E	Caltrans would contract with a recognized expert in the field of inland fisheries to help design parameters for a diversion that would not impact fish passage or habitat. General parameters for a diversion at this location would include a natural bottom diversion as well as a restriction on increasing or decreasing the average daily flow rate.
<b>VISUAL/LANDSCAPE</b>			

Special Architectural Treatments	Landscape Architecture/ Design/ Resident Engineer	PS&E	New concrete bridge railing would be designed to blend into, and be visually compatible with the surrounding environment. Staining would be used as appropriate
Erosion Control /Invasive species considerations (coordination w/Biology)	Landscape Architecture/ Design/ Resident Engineer	PS&E	All disturbed slopes would be revegetated with native plant materials. Any damage to vegetation due to the construction and staging area would be restored to its original state by planting native vegetation in-kind.
<b>CULTURAL RESOURCES</b>			
Unearth Human Remains/Cultural Materials Provisions	Generalist/ Cultural/ Resident Engineer	Construction	If human remains/cultural materials are discovered during construction, all earth moving activity within and around the immediate discovery area and contact shall be made with the Caltrans Division of Environmental Planning. Construction shall be diverted until a qualified archaeologist can assess the nature and significance of the find.
Unearth Human Remains Provisions	Generalist/ Cultural/ Resident Engineer	Construction	If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Gary Iverson, Caltrans District 7, Heritage Resource Coordination at (213)880-2010.
<b>UTILITIES/EMERGENCY SERVICE PROVIDERS</b>			
Measures to minimize access delays	Resident Engineer	PS&E/ Construction	Prior notification of construction activities would be given to USFS, local law enforcement, and local fire department agencies in order to plan accordingly for access through or around the construction area.
<b>NOISE ATTENUATION</b>			
Construction equipment noise control	Resident Engineer	Construction	Construction activities would be limited to daylight hours to minimize harm resulting from noise to local wildlife species.
Construction equipment noise control	Resident Engineer	Construction	Equipment Noise Abatement should be applied to old equipment so that both old and new equipment noise levels are attenuated. General noise control technology can have substantially quieter construction equipment when manufacturers apply the state of the art technology to new equipment or repair old equipment to maintain original equipment noise levels.
Construction equipment noise control	Resident Engineer	Construction	Implementation of all appropriate sound control requirements identified in the Caltrans Standard Specifications section 7-1.011. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations. The construction noise minimization measures would be finalized once an alternative is chosen and design plans are fully completed.
<b>AIR QUALITY</b>			

Dust Control and other Best Management Practices	Resident Engineer	Construction	Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as: air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; and convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
Dust Control and other Best Management Practices	Resident Engineer	Construction	Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.
Dust Control and other Best Management Practices	Resident Engineer	Construction	Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.  The proposed project is located within the South Coast Air Quality Management District and will need to comply with the Fugitive Dust Implementation Rule 403 to alleviate temporary emissions during project construction. A "Fugitive Dust Mitigation Plan" shall be developed and adopted for the project if applicable.
Dust Control and other Best Management Practices	Resident Engineer	Construction	All trucks shall be required to cover their loads as required by California Vehicle Code 23114.
Dust Control and other Best Management Practices	Resident Engineer	Construction	The applicant shall notify the District prior to issuance of demolition permits for any onsite structures. Demolition and/or renovation activities shall be conducted in compliance with District Rule 62.7, Asbestos – Demolition and Renovation
Dust Control and other Best Management Practices	Resident Engineer	Construction	The applicant shall notify the District prior to issuance of demolition permits for any onsite structures. Demolition and/or renovation activities shall be conducted in compliance with District Rule 62.7, Asbestos – Demolition and Renovation
<b>HAZARDOUS MATERIALS INVESTIGATION/TREATMENT</b>			
Road Striping Paint Lead Provisions	Hazardous Waste	PS&E	There is a concern that existing yellow thermoplastic/paint striping that requires removal may contain lead and chromium at concentrations that are considered hazardous. Once the traffic stripe removal method is finalized, final analyses of lead and chromium concentration levels will determine whether the waste can be relinquished to the contractor for possible recycling, or whether it must be disposed of at a Class I Facility.
Dewatering of Groundwater	Hazardous Waste/ Resident Engineer	Construction	If the proposed project requires dewatering of groundwater during construction, a Site Investigation would be required to characterize local groundwater quality and a Construction Dewatering Permit would need to be obtained from the Regional Water Quality Control Board. Compliance with the permit conditions would avoid or minimize any potential impacts.
Asbestos Containing Materials Testing	Hazardous Waste/ Resident Engineer	Construction	Testing for Asbestos Containing Materials (ACM) would be done during construction. If ACM is found, a permit may be required from the regional Air Quality Management District prior to any work on the structure. Compliance with the permit conditions would avoid or minimize any potential impacts.

GEOLOGY/ SOILS/ SEISMIC/ TOPOGRAPHY			
Geological Considerations	Design/ Resident Engineer	PS&E/ Construction	<p>The bridge structure would be designed and built to withstand earthquakes and ground movement according to current technology and design details.</p> <p>Upon completion of the project, the stream channel and rock levee would be re-contoured to match the existing topography of the streambed and adjacent slopes.</p>
WATER QUALITY REQUIREMENTS			
Storm Water/ Water Quality Control Measures	Design/ Water Quality/ Stormwater/ Resident Engineer	PS&E/ Construction	<p>A Storm Water Pollution Prevention Plan (SWPPP) and erosion control plan would be required. This plan would incorporate recommendations and approval from the Regional Water Quality Control Board (RWQCB). These plans would be submitted to the Resident Engineer (RE) for approval. All work would be conducted outside of the rainy season (Oct 1- April 30) to avoid potential impacts to water quality.</p> <p>During final design a water diversion plan would be prepared, and, upon approval and implementation, would help to avoid potential impacts to water quality within the wetted channel of the streambed.</p>
Stormwater Management Plan (SWMP)/Water Pollution Control Program (WPCP)	Design/ Water Quality  Stormwater/ Resident Engineer	PS&E/  Construction	<p>Temporary construction Best Management Practices (BMPs) would be used for the proposed project based on Appendix C of the Project Planning and Design Guide. Typical construction site BMPs are: silt fencing, sandbags, straw bale barriers, fiber rolls, geotextiles, wind erosion control, and so on. Site data sources include aerial photography, USGS maps, and the County of Los Angeles Hydrology Manual.</p> <p>Cement, concrete, washings, asphalt, paint, oil/other petroleum products, or any other substances which could be hazardous to aquatic life, shall be prevented from contaminating the soil and/or entering any drainages.</p>